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GERMAN MILITARY TRAINING

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**MILITARY INTELLIGENCE
SERVICE**

**SPECIAL SERIES
No. 3**

WAR DEPARTMENT

Washington, September 17, 1942

MIS 461

NOTICE

1. The information summarized here is based on a variety of sources: on German manuals, on technical articles in German military reviews, and above all on the detailed reports of United States observers who saw the German Army at close range in its work of preparing for this war and during the first 2 years of conflict.

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Section I. INTRODUCTION

This bulletin proposes to summarize information which will serve three purposes:

1. It will permit a better appreciation of the basis of German military strength.

The strength of the German Army and its early success in this war owe much to two factors: planning and training. The Nazi leaders planned this war for years in advance of their attack. They prepared for it by a system of military training which begins with children of high-school age. The training system was directed by the old professional army: it depended on effort, thoroughness, and the application of old and tested principles to the means of modern warfare. As an observer remarks, the Germans believed that by hard work and hard training they would "save blood later." This training gave the German army a time advantage over its rivals, although this advantage is being steadily reduced.

2. It will contribute to our knowledge of characteristic German tactics.

Those principles of tactics and leadership which are emphasized in training are inevitably reflected in the actual conduct of operations. While this bulletin will make no detailed study of German tactics, it will bring out the main doctrines which are applied in battle as a result of training.

3. It will suggest methods and points of view which may be useful in training U. S. troops.

There are many basic similarities between U. S. training doctrines and those of the German Army, though there are naturally many differences in their use or application. We can learn from the differences as well as the similarities. As far as possible, concrete examples have been given, and in the appendixes there are detailed illustrations, at some length, of certain phases of German training methods.

Section II. TRAINING IN PREPARATION FOR MILITARY SERVICE

1. GENERAL

The Nazi government from the start was dedicated to the purpose of a war of conquest; and from 1934 on, the Party controlled and directed every aspect of German life to this aim. German military leaders have followed Clausewitz for years, but only under the Nazi regime could his key concept of total war be realized: the principle that every agency and every individual of a nation must be used in the effort of war. Nothing is more revealing of Nazi plans and methods than the application of this principle in a very broad program of military training.

The goal of this program was a large and highly trained army, but the shaping of this army was not left to the 2 years of actual military training for conscripts. From the age of 14, boys were to receive a preparation for military service which would cover much of the basic training ordinarily given recruits. In addition, men older than conscript age, with or

without previous military service, were to be given various types of auxiliary, background, or "refresher" training.

The Nazi Party, through its various branches, was mainly responsible for civilian training outside the army proper. This included due concern for specialized training in skills needed for mechanized warfare. A National Socialist Flying Corps sponsored instruction in the rudiments of flying and in glider practice. The National Socialist Motor Corps trained a large reserve of youths in all types of driving for mechanized service, and thus relieved army motor schools of many hours of instruction. A German article in 1940 claimed that 125,000 men had been given experience in "military motorization." A Motor Boat Corps cooperated with the Army and Marines to prepare men for water-transport operations.

The activities of the Party are particularly concerned with the indoctrination of all German citizens for war. The basic ideas in this indoctrination are well known and are reiterated in Hitler's speeches: the theory of Germany's "natural" rights; the concept of the "master race"; the exaltation of state and leader; the glorification of war and military virtues, etc. The schools, press, radio, and movies are controlled by the Party and support its efforts in every direction by propaganda which has to fear no rival; the penal code prevents any free discussion in the field of ideas. Every German household belongs to a local unit (Block) organized to carry out the Party educational program.

A German lieutenant has summed up this work of indoctrination:

In his parent's home, in school, in the Hitler Youth, in the subdivisions of the movement, in the shop, and in the Labor Service, the future Army recruit has been bred as a National Socialist: *he does not know anything else* but allegiance to the National Socialist State, and the life work of being a German.

2. TRAINING OF THE GERMAN YOUTH

a. The Hitler Youth

At the age of 10, German boys are brought into the Nazi scheme as members of the "Young Folk" (Jung Volk) organization, and receive their first taste of official indoctrination. Real shaping for the army begins at 14, when they enter the "Hitler Youth" (Hitler Jugend).

Even before the war, this organization was mainly concerned with preparing boys for the army, both by instilling military mental attitudes and by military training. A U. S. observer gives the following description of an exercise of German boys carried out on a Sunday morning:

Two groups, one of mixed Hitler Jugend and Jung Volk, 30 strong, and the other a similar group of 22 cyclists on 11 bicycles, marched into Gruenewald Forest under the command of a Hitler Youth. This boy appeared to be 15 or 16 years of age. He halted his command, dressed it with skill and precision, and announced his mission in a clear and definite manner: "The enemy is reported advancing from south to north through Gruenewald Forest. At 7 o'clock he was reported to be entering * * *. My mission is to determine at once, and report

to headquarters, the position and activity of its advance units. My sector is * * *."

It will not be necessary to go into the young commander's estimate of the situation and his orders to his subordinates. They would have done credit to a professional Army officer. That boy, still 2 or 3 years from active service as a private in the Army, was able to estimate a difficult situation, and organize and put into execution a rather complex plan to carry out his mission on a sector nearly 1,000 meters wide. This demanded an extended series of rapid-fire orders. It was evident that he had control of his boys. A continuous stream of bicycle messengers carried reports from advance units to the leader's post. He, in turn, sent frequent written messages to some post to his rear.

The observer was frankly amazed at this performance and spent the entire morning with this group. To be sure, there was a certain amount of laughing and horseplay among the boys. This was not repressed; but any lack of attention to duty called forth immediate and severe rebuke from the leaders. It was evident that the youngster in charge was on his own. Some other means must have been provided for checking up on how well that youthful commander had accomplished his mission.

Two of his units—one boy each—failed to follow instructions. Some were lost, and some had difficulty in reporting clearly what they saw; some failed in their individual missions. But the boy leader did not fail in his. He finally recalled all units with skill, marched them to the rear, and very ably praised and criticized individual performance.

On the whole, it was a remarkable demonstration of how German military leadership is developed.

Another observer saw Hitler Youth organizations engaged in battalion maneuvers, and reports that their performance would be creditable to regular troops.

In 1939 the Storm Trooper section of the Nazi party took charge of the Hitler Youth, and after the start of war boys 16 to 18 years of age were compelled to take 6 months of regular pre-military work. The aim was to provide the army with the largest possible reserve of "mentally, physically, and militarily trained young men." The training includes infantry fundamentals, care and use of weapons, and signaling. The Hitler Youth has been used in a variety of auxiliary services during the war: spotting aircraft, performing office work at airports, painting runways, harvesting crops, tending children in day nurseries, collecting useful junk and trash, soliciting for the Winter Help, singing at hospitals, and putting on entertainment for soldiers at the front.

The following statistics, based on estimates by a U. S. observer, suggest the scope and variety of Hitler Youth activities:

(1) The National Socialist Flying Corps furnished the Hitler Youth fliers with enough gliders, planes, and instructors to teach 135,000 boys how to fly each year.

(2) The motorized units of the Hitler Youth enrolled 295,000 boys each year. The National Socialist Party set up 1,300 repair shops for the units, and each year provided them with 5,000 motorcycles.

(3) The Hitler Youth Marines had an annual enrollment of 78,000.

(4) The National Socialist Party supplied the Hitler Youth with 10,000 revolvers a year and a large number of rifles. Enough rifles were furnished to enable 30,000 outstanding marksmen to participate in

rifle matches. The Hitler Youth had its own firearms school at Obermatzfeld, Thuringia.

(5) During an average 12 months, the Hitler Youth conducted 3,540 official outdoor camps, which were attended by 565,000 boys.

(6) In 1 year, 6,000,000 German boys participated in sport events organized by the Hitler Youth Office.

b. Labor Service

At the age of 18, German boys entered the compulsory Labor Service (Arbeitsdienst) for a 6-months term. The Labor Service work gave them excellent conditioning and hardening. Furthermore, it accustomed men to living in groups under military discipline.

With the outbreak of war most of the male¹ Labor Service units were transferred to the armed forces to serve as construction companies (Baukompanien), and the size of the units was increased from 200 to 400—in some cases to 600. On December 20, 1939, a law ordered that normal Labor Service for men was to continue despite the special war work of the construction companies.

The Labor Service youths perform miscellaneous tasks in rear areas, being kept out of combat areas as much as possible. The tasks include the following:²

¹ Girls of the same age could volunteer for a year of similar service. At the outbreak of war, this was made compulsory, and the number of girls in Labor Service increased from 30,000 to 100,000.

² Generally, the girls' branch performs none of these duties except those pertaining to agriculture. They work in factories and do other types of work on the home front.

Cultivating farms in occupied areas (Poland, for example); doing agricultural work in Germany wherever there are labor shortages; constructing and maintaining important highways; constructing and improving fortifications, bridges, and airports; salvaging equipment, munitions, and matériel in battle areas; policing battlefields; performing sentry duty in occupied areas; camouflaging and sandbagging military establishments; and assisting in the transportation of food, ammunition, and fuel during rapid military advances.

3. CONCLUSION

When German youths, at 19, were inducted for military service, most of them had already had the equivalent of basic military training, were in excellent physical condition, and had been indoctrinated both with Nazi ideology and military attitudes. As a result, their training period as conscripts could move very rapidly through the preliminary stages; in 2 or 3 months the conscripts could take part in maneuvers involving divisions or armies. Because of the work done by the Hitler Youth and the Labor Service, the 2-year (pre-war) training in the Army could advance much more rapidly and effectively.

Furthermore, German boys had received good opportunity to practice and develop qualities of leadership, and officer material was already clearly marked out by the time they reached military age.

Section III. WORK OF THE SA (STORM TROOPERS)

4. GENERAL

One of the most active branches of the Nazi party, the SA had particular responsibility in connection with the Hitler Youth. In addition, the SA performed important functions in giving a certain amount of military training to older civilians, both within and outside its own ranks.

5. THE SA AS A MILITARY RESERVE

When the Nazi party was rising to power, the SA (and the elite guard, SS) was in effect a private army of Hitler. When he seized control of the state, the SA was gradually merged into the framework of the military system and became more closely connected with the Regular Army.

By 1935, more than 100 divisions (called brigades) of SA troops had been organized, including men over 45 years old. The regiments were named after old pre-Versailles units, and carried on their traditions. Only a few units were technically a part of the armed forces, and the main function of the SA was to pro-

vide continuous and effective military training for a large mass of the civilian population, outside the regular 2-year service of conscripts in the Regular Army. By 1939 the SA had been organized to provide specialist training in such lines as cavalry, signaling, engineers, medical service, and navy. It was estimated that 13,400 Reserve officers and 30,000 Reserve NCO's were among its members. One of its important jobs was to give military training to men over 21 who had not received any training in the pre-Hitler years when Germany's Army had been restricted to a small standing Army (Reichswehr).

The SA gave a coveted Sports Medal on a basis which shows very well how everything in their program was pointed toward military service. The examinations for this medal include (aside from running and swimming tests) rifle shooting, camouflage, hand-grenade target throwing, marching 25 km. with a 25-pound pack, a 200-meter dash in gas mask, etc.

In 1939, Hitler made this function of the SA even clearer by prescribing that all men who had received the regular 2 years of military training should enter the SA. Regulations were drawn up which required 110 hours of training a year, and a U. S. observer, in 1939, said that this training equalled that received in pre-war years by the U. S. National Guard units. By 1939, the Sports Medal had been acquired by 800,000 men outside the SA ranks.

As the observer noted, an important aspect of the SA control of reservists was the fact that all these

men would remain completely under the influence of Nazi party doctrines and controls.

6. CONCLUSION

With the approach of war, the SA members were largely called into the regular armed forces (as individuals rather than by units). Enough of the leaders remained, however, to continue the work with the Hitler Youth and with older civilians not yet called out. According to one estimate, 1,500,000 men were receiving SA training, largely on Sundays and evenings, in the spring of 1940.

The work done by the SA provided a great mass of partially trained men, in all age groups, who could be quickly organized and used in regular divisions on the outbreak of war. A large part of German military training had been accomplished with men who were technically in a civilian status.

As a result, a German division during the war could be sent into combat with a minimum of training. A U. S. observer, in April 1940, visited the camp of a division which had been called in November 1939. It had received 2 months' training in the school of the soldier and company, and then had had coordinated exercises for battalion and division operations. By May 1940, the division expected to be in the combat zone.

Another observer states that at present the basic instruction lasts about 6 weeks and is followed by 4 to 8 weeks of training in large units.

Section IV. PROCUREMENT AND TRAINING OF OFFICERS

7. GENERAL

In preparing for the large army used in his war of conquest, Hitler faced the serious problem of developing an adequate number of trained officers to operate 300 or more divisions and the various specialized corps and services. This problem was solved in large part between 1933 and the beginning of the war.

One advantage, at the start, was that the small standing Army (Reichswehr) permitted Germany by the Versailles treaty had been excellently trained. Also, it preserved the best traditions of the old German Army, and constituted a valuable reservoir of officer material for the rapid expansion of the new Army. In addition, there were available many thousands of men who had seen service in the First World War and who could be used again. Many of these took part in the SA training activities discussed earlier. Finally, the German General Staff maintained its high standards and prestige, and was ready to deal with this problem of officer procurement.

8. OFFICER TRAINING PRIOR TO THE WAR

The program of training which produced most of the Regular Army officers in this period throws light on the character of the Army, its relation to the pre-Hitler army, and the high quality of standards prescribed for officers.

The civilian youth wishing to secure admission applied to the particular regiment or unit of his choice. He must be unmarried, be an Aryan, and have a certificate of graduation from a gymnasium (equivalent to second-year U. S. college work). He was given interviews by an examining board of officers, and examinations which tested his moral qualities and his ability to stand up under strain. Much importance was attached to a psychological test.

After passing these examinations, the candidate—now a cadet—served for 1 year in the ranks of the unit which received him. There he received the same training given ordinary recruits, and enjoyed no favors. It was desired that the cadets should thereby learn to understand the mental attitudes, problems, and points of view of the common soldier. On the side, and in addition to regular training, the cadets did special study on the use of weapons.

After this year, the cadets were sent to a military school for 9 months, and received basic training in military theory, identical for all branches of the service. There were 4 (later 5) such schools, admirably equipped without regard to expense. The course

included field exercises. About 2,500 officers a year could be turned out in these schools.

After these 9 months the cadets went to a weapons school "destined to bring the candidates back to earth after their theoretical courses." Here they received training appropriate for their particular branch, and an opportunity to command and train units attached to the school.

Finally, the cadet performed a 2- or 3-months tour of duty back with his regiment—and then, if elected by unanimous vote of the officers of his unit, he was received for promotion as a second lieutenant.

This method, which bears the hall-mark of the old Prussian aristocratic tradition, was modified gradually by provisions which made it more possible for Reserve officers and specially qualified NCO's to obtain commissions.

9. TRAINING DURING THE WAR

With the approach of war, the programs for officer training were enlarged and speeded up. In 1940, U. S. observers estimated that schools were turning out about 6,500 officers every 4 months, and that 30,000 new officers entered the Army between September 1939 and December 1940.

Men applying for a commission in the Regular Army continued to undergo a relatively long training course, in principle as thorough as that of peacetime, and quite similar in plan. Candidates for temporary (war) commissions apparently receive a shorter pe-

riod of training, sometimes, according to observers' reports, for a few months only. All candidates for officer grades must have had 15 months of service, and at least 2 months of experience, in the field, as leader of a section or platoon.

Although these standards insure that candidates have had considerable background training, nevertheless, expanding the German Army to six times its peacetime figure has produced obvious problems.

Many Reserve officers and NCO's have been commissioned from the ranks and from veterans of the First World War. Civilians have been appointed to administrative posts. Older officers and civilian specialists have been thus used to free the line officer for his main task: leadership of troops in combat. Attention has been paid to "continuation" training of officers in the field.

10. CONTINUATION TRAINING OF OFFICERS

This has received a good deal of attention since the start of war, owing to the relatively short training received by many officers. The Germans are particularly concerned with the progressive training of company officers, on whom depends the combat efficiency of the fighting units. One of the essential duties of a commanding officer in wartime is to insure the further military education of his junior officers, who must be made to realize that to "stand still is to retrogress."

The concept of continuation training is broad. It involves a review of fundamentals, with constant ref-

erence to the Manual of Troop Leadership. It stresses the need for versatility; the infantry officer must familiarize himself with the capacities of other arms than his own. Above all, the officer must prepare himself for emergency service in the next higher grade, or for replacing comrades in other executive positions. *It is the responsibility of senior officers to assist their juniors in training for the next higher grade.*

German sources illustrate these principles:¹

In the first place, let us outline the requirements for the development of our officers. The strength of the German Army has lain and still lies in the platoon commander at the front. This will remain so in the future, and the example of our lieutenant as he stands and fights at the front cannot be emulated by any nation on earth, according to a well-known saying of Bismarck.

One would misjudge the lieutenant's mission entirely, however, if one would have him conform exclusively to the services of, and requirements for, a platoon commander. Actual conditions require much more of the lieutenant than mere service as such. Any lieutenant may, at any time, have to educate, train, and lead a company, battery, or other similar unit, and any lieutenant may suddenly have to serve as a staff officer or even as an adjutant or aide-de-camp * * *. The progressive training of the officer corps must be carried out with this eventuality in mind.

If the officer is to be ready to serve in several different capacities at a moment's notice, he must be thoroughly indoctrinated in the fundamentals of tac-

¹ Excerpts from an article in the "Militaer Wochenblatt."

tics. This point is emphasized in the German source just quoted:

One difficulty is that a great many young officers have no knowledge of the fundamentals of tactics. Many dangerous mistakes arise from this fact; and during lessons, there is often vague discussion because of lack of understanding. Lack of indoctrination is a most serious defect. It results in many unnecessary commands. Just an example: Our unit is an infantry battalion and we are in an engagement; the situation becomes critical. From all sides, commands and reports come in to the battalion commander. The adjutant and the commander of a machine-gun company become casualties. The commander, an especially energetic man, had made an important decision and was just about to give orders to carry it out. What if the adjutant, totally ignorant of tactics, transmits the orders to a commander of the machine-gun company who is just as ignorant? Of course, we have selected as an example a particularly gross case. But one can hardly pretend that it is outside the sphere of possibility. One must insist, therefore, that thorough indoctrination of all officers regarding tactical principles is absolutely essential. Young officers must be thoroughly familiar with the tactics of all units up to and including the battalion. In this connection much work is needed. Older officers must work to teach and the younger ones must work hard to learn. It is an open question as to which task is the most difficult, but that is immaterial. The important thing is to attain the clearly defined objective.

The ideal desired here was summed up by a German officer in conversation with an observer:

We apply simple methods to our leadership. You will find that our lower units are so trained that many in them beside the leader are capable of taking command.

Section V. STANDARDS FOR OFFICERS

11. GENERAL

The German Army traditions set high standards for officers, both as to character and as to professional ability. Great attention is paid to this subject in professional journals and books.

Particular concern is shown for officers of company rank. This is partly because, in a rapidly expanding army, it was necessary to absorb and integrate a large number of new officers at the lower grades. But it is also due to a conviction that the efficiency and leadership standards of these officers are of crucial importance for the combat success of the army; these officers actually lead the units in front-line combat.

With this principle in mind, the German General Staff has followed a policy which is described very clearly by a U. S. observer:

In the German Army, leadership is emphasized more than generalship. The general officer must, of course, combine to an outstanding degree proved qualifications for field leadership,

mental resiliency, and executive capacity, supported by unusual physical stamina and ruggedness of constitution. German general officers were selected on this basis prior to mobilization. They won their positions in the pre-war building, training, and equipping of the modern army. All of them have had World War experience. As far as we know, none of them has been relieved from command during operations. The efficiency and ability of these German generals seems to be taken for granted. *They have received practically no publicity during the war.* Only one, General of Infantry Eduard Dietl, who commanded at Narvik, has been brought before the public for his accomplishments. This was not for his generalship, but for the qualities of leadership displayed in situations normally met with by leaders in the lower command.

On the contrary, leaders in the lower command have received a great deal of publicity since the outbreak of war.

Another general principle underlying German training of officers is the view that good leaders can be developed for the lower commands by careful training, for leadership is not confined to a few individuals gifted with superior qualities. However, every effort is made to find the right place for each individual, according to his special aptitudes, and a good deal of shifting is done in order to accomplish this.

A German officer, in conversation, accounted for German military success in a way which brings out main standards of leadership prized in his army:

I would say that the success of our leadership depends upon the selection of officers of proved character and skill, and upon our system of learning each required task and maneuver to perfection by repeated practice. One can only learn by doing.

The proverb "Wissen ist Macht" (knowledge is power) is in

truth not accurate. Knowledge becomes power only when it is being successfully applied in the gaining of an objective.

12. CHARACTER

The Germans fully realize the importance of character as a basis for successful combat leadership. Their teachings on military leadership remind officers constantly of their responsibility to lead by example and self-discipline.

A book called the "Company Commander" says:

The company commander is a living example to every man in his organization. To be an officer means to set an example for the men. The officer must be his soldier's incarnation of soldiery, his model. If the German officer is inspired by this mission, the best and deepest qualities of his soul will be awakened; his life's aim will be fulfilled if he succeeds, through knowledge, demeanor, and conviction, in forcing his troops to follow him. This is the manly purpose for which it is worthwhile to stake life in order to win life.

In Germany, the road to the rank of officer is open to every capable soldier; the destination can be reached only by efficiency in time of war and by actions in the face of the enemy.

The real authority of an officer is recreated daily by his entire attitude; the ancient proverb applies—"earn it in order to possess it." The more his men are convinced that the authority of his rank is deserved through moral worth, the stronger will be the influence of the officer's personality. No one should expect that rank attained by promotion will give to his position authority sufficiently high for him to relax his effort, in the belief that the objective has been reached. Real authority is not dependent upon shoulder straps, stars, and badges; it depends only on efficiency and worth.

Discipline has always been recognized as essential in German training, and the company officers are giv-

en the main responsibility for developing discipline by example as well as precept. The book just quoted says on this subject:

Discipline is the basic doctrine of the army; the objective of soldierly training must be to make it the unshakable principle of every individual. If the officer personifies physical and moral discipline, and thereby sets the example for the conduct of his men, he will achieve his aim. Even in difficult situations his authority will be unquestioned if he has convinced his men of his sincerity and leadership. He need not be the most clever, but he must be the most faultless man of his unit. The German soldier has an instinctive understanding—particularly the simple man—of the moral qualities of his superior. He cheerfully follows a leader whom he respects, whom he can admire. Daily life on the battleground forces the officer to be under the eyes of his men day and night. This necessitates a large amount of self-discipline, both on and off duty, which includes not only cheerful and conscientious fulfillment of all duties, but also modesty in requirements for quarters and food, soberness in drink, self-control in sexual matters, cleanliness in speech, and a balanced character.

The German military bible for company officers is the manual of "Troop Leadership." This book gives their basic tactical and combat doctrine, and has plenty to say on the moral aspects of leadership. The following are some quotations:

War is the severest test of spiritual and physical strength. In war, character outweighs intellect. Many stand forth on the field of battle, who in peace would remain unnoticed. * * *

The officer is a leader and a teacher. Besides his knowledge of men and his sense of justice, he must be distinguished by his

superior knowledge and experience, his earnestness, his self-control, and his courage. * * *

The example and personal conduct of officers and noncommissioned officers are of decisive influence on the troops. The officer who, in the face of the enemy, is cold-blooded, decisive, and courageous inspires his troops onward. The officer must, likewise, find the way to the hearts of his subordinates and gain their trust through an understanding of their feelings and thoughts, and through never-ceasing care of their needs. * * *

Mutual trust is the surest basis of discipline in necessity and danger.

13. RELATIONS OF COMPANY OFFICERS WITH ENLISTED PERSONNEL

German directives stress the desirability of comradeship in units as a moral basis for fighting efficiency, and again the company officers are reminded of their responsibility. The "Company Commander" says:

When the soldier learns by experience that he is being taken care of and that it is the officer, as his best comrade, who sees to this care, then he is ready. He will follow such a superior through thick and thin and will cheerfully perform the most difficult duties. The officer must always set an example by his own conduct and his soldierly qualities. He must never think of himself until his men have been cared for. Only such an example can convince of the moral right to demand services from others; only the model life can confirm that right. The officer's own efficiency alone will emphasize the necessity of his orders. If the men copy the examples set by the officers, officers and men will be joined.

Comradely association and festivities place the officer in a situation basically different from that in times of peace. He

must never represent a contrast to the privations and restrictions which the men necessarily take upon themselves, and he must never forget that their need for association and festivity is no less great or justified than his own.

Burdens and privations, restrictions and negations are shared mutually and equally. Every company commander must be a Spartan. His men must feel that privations mean nothing to him, that he rises above such problems, and that daily difficulties cannot break his spirit.

The company officer is advised to be severe when necessary but without resorting to abuse; to use disciplinary punishment as rarely as possible, and always in a way that is clearly justified; to take an interest in the personal difficulties* of his men; to maintain a cheerful atmosphere under all circumstances; to visit and converse with his troops in quarters; and to take the greatest care in choice and supervision of noncommissioned officers.

German officers are expected to give attention to the mental outlook of their men, and this includes giving them frequent talks on the war. The soldier must know that the war is his personal affair, and he must be instructed on its causes, meaning, and progress. It is believed that the soldiers who are informed as to why they are fighting, and of their part in the battle, will show improved discipline in combat. Newspapers, radio, and books are used to assist toward this end. An article in a military review advises the company commander to assemble his unit once a week for discussion. The "father of the company" should speak on all matters, official

and unofficial, current events, politics, etc., which influence the mental attitudes and morale of his men.

“Troop Leadership” reminds officers that:

The leaders must live with their troops, participating in their dangers, their wants, their joys, their sorrows. Only in this way can they estimate the battle worth and the requirements of the troops.

Man is not responsible for himself alone, but also for his comrades. He who can do more, who has greater capacity of accomplishment, must instruct the inexperienced and weaker.

From such conduct the feeling of real comradeship develops, which is just as important between the leaders and the men as between the men themselves.

Troops welded together only superficially, and not through long training and experience more easily fail under severe strain and under unexpected crises. Therefore, before the outbreak of war the development and maintenance of steadiness and discipline in the troops, as well their training, is of decisive importance.

The precepts outlined above have been actually carried out, as U. S. observers have reported during the past few years. One report states:

German leadership is based on mutual respect between officer and man * * *. We were again impressed with the fact that cooperation between officers and men works both ways.

SECTION VI. PRINCIPLES OF LEADERSHIP

14. GENERAL

The training of German officers of all grades for the present war has been so conducted as to emphasize certain basic doctrines. While these may seem rather general in character, they must be understood in order to appreciate German tactics; according to observers, German combat tactics reflect the application of these doctrines, which are by no means pious phrases of military theorists. The very concrete and practical manual on "Troop Leadership" is full of references to these principles, as later quotations will show.

15. THE TASK-FORCE PRINCIPLE: COMBINED OPERATIONS

The German Army has been organized and trained to operate on the task-force principle, according to the definition of the task-force as "a unit of all arms and services under one commander for the accom-

plishment of a single specified mission." This principle operates at all levels of command.

When a mission is assigned to a commander, he is given the means judged necessary to accomplish it. These means are turned over to him for combined training, by which his men are molded into a combat team. The members of the team must know their mission and work together for its accomplishment. Individual units are called upon to merge into the structure of the combat team. The training phase permits commanders and staffs to become thoroughly acquainted with all their officers. In this way, they learn one another's shortcomings and strong points so that many later misunderstandings are prevented in the stress of combat. Personal combinations thus built up often become so strong that they are maintained through successive campaigns.

The carrying out of this principle makes certain demands which are reflected in training practice:

a. Every effort is made to discourage rivalry between the components of a team. For example, though march songs are highly regarded and developed, there are no songs about the superiority of infantry to engineers (or to artillery, etc.). There are no inter-company or interbattery athletics to develop useless competitive emotions. Commanders of subordinate units are so imbued with the feeling of cooperation that they go out of their way to assist one another.

b. Considerable attention is given to acquainting officers of one branch with the weapons and tactics of

the other components of a team. Even the manual of a specialized branch shows this effort: the anti-aircraft gunner's manual has a section on what these gunners must know about their employment as a part of ground-force teams, including a discussion of divisional tactics.

Armored warfare,¹ in particular, puts the highest premium on close cooperation of all arms. The head of a German Armored Force School said to a U. S. observer:

The modern armored unit with its modern equipment demands the best in leadership and technical ability. Its commander must not only be thoroughly familiar with the capabilities, limitations, and tactical use of matériel in his own particular organization, but he must be equally familiar with the matériel in the organizations with which he is likely to cooperate.

The greatest factor in successful employment of armed troops is speed in obtaining the initial coordination of arms, and in the execution of coordinated missions by various arms.

The observer remarked that the goal of instruction at the school was to make each armored unit a smooth-working organization rather than a collection of individual experts.

c. A heavy responsibility is placed on commanders for the proper development of all means of communication.

This is emphasized in all stages of training. As early as 1933 there were courses at a Signal Corps

¹ See "The German Armored Army," Special Series, No. 2, August 10, 1942, Military Intelligence Service.

School for commanding officers and staffs of infantry and artillery regiments, and these courses were to be extended later to include divisional commanders and staffs.

16. AGGRESSIVENESS AND INITIATIVE

The prime characteristic of German tactical doctrine is maintenance of the initiative and avoidance of stabilization. The Germans believe absolutely that if a trained commander prepares and executes aggressive moves, with even average ability and reasonable speed, the enemy will be kept too busy meeting them to carry out successful offensive measures.

In these words, a U. S. observer summed up his close-range impression of German tactical doctrine, and every stage of the war has confirmed his judgment. The principle of aggressive action is inculcated at every level of training, from squad exercises to the General Staff School. A German officer phrased the concept in a way that can be understood by troops:

Our men are taught that their own safety depends upon their getting to the enemy's rear and not in staying in *front* of him. This is fundamental in our training.

Aggressive tactics require the use of initiative by combat leaders, down to platoon commanders and noncommissioned officers. Development of this capacity for taking the initiative is stressed at all points in military training, whether theoretical or practical. No illusion surviving the First World War is more dangerous than the notion that German leaders (espe-

cially of small units) are bound by rigid and mechanical regulations and can move only in accordance with detailed, prearranged plans.

In actual fact, German leaders of small units have shown great skill in this war in adapting their tactics flexibly to meet new situations. They have been trained to do this; the handbook on "The German Squad in Combat" illustrates the doctrine:

In the execution of battle missions, one should be most careful to avoid the idea that only one solution can be the right one. Only success in an actual case could prove that a given solution was the right one.

A model solution must *not* be drilled into the soldiers. They, and particularly the squad leader, should be trained to be flexible, and should learn to be equal to any occasion.

One of the reasons for adding artillery and engineer units to a German regiment was to give the regimental commander a freer hand, to provide him with the means for exercising the fullest possible initiative. The same concept governs the composition of task forces, whether for the African Army of Rommel, or for small groups such as those which constituted the spearheads of invasion in Norway.

German regulations place due value on getting as much information as possible about the enemy (position, capabilities, etc.) as a prerequisite for action. But regulations also prevent this from becoming a requirement that cripples action. Commanders are warned by the manual of "Troop Leadership" that—

Obscurity of the situation is the rule. Seldom will one have exact information of the enemy. Clarification of the

hostile situation is a self-evident demand. However, to wait in tense situations for information is seldom a token of strong leadership, but often one of weakness.

So the officer is taught to attack in order to clear up the situation and gain a basis for an estimate of further action. "Battle itself provides the most reliable means of estimating the enemy."

Omission and delay are regarded as greater crimes than the choice of the wrong method of action. In training exercises, the choice of tactical method is subject to full criticism by reviewing officers, but no man is reprimanded because he tried to do something and failed.

The following quotations from the manual of "Troop Leadership" are further illustrations of the emphasis placed on the general doctrine of aggressiveness:

The teaching of the conduct of war cannot be concentrated exhaustively in regulations. The principles so enunciated must be employed dependent upon the situation. * * *

The emptiness of the battlefield demands independently thinking and acting fighters, who, considering each situation, are dominated by the determination to act boldly and decisively, and to arrive at success. * * *

The first demand in war is decisive action. Everyone, the highest commander and the most junior soldier, must be aware that omissions and neglect incriminate him more severely than mistake in the choice of means. * * *

Great successes presume boldness and daring preceded by good judgment. * * *

We never have at our disposal all the desired forces for the decisive action. He who will be secure everywhere, or who

fixes forces in secondary tasks, acts contrary to the fundamental.

The weaker force, through speed, mobility, great march accomplishments, surprise and deception, and utilization of darkness and the terrain to the fullest, can be the stronger at the decisive area. * * *

Time and space must be correctly estimated, favorable situations quickly recognized and decisively exploited. Every advantage over the enemy increases our own freedom of action.

The attack is launched in order to defeat the enemy. The attacker has the initiative. Superiority of leadership and of troops shows to the best advantage in the attack. Success does not always come to superiority of numbers.

A German officer, commenting on the early campaigns of the war, recognized the capacity of very young officers to meet these standards of leadership:

Before the campaign in the West, we underestimated the wonderful leadership of our 22-year-old company commanders. They acted without hesitation where older men would have paused for long consideration and heavy artillery reinforcements. Time and again we found these young commanders calling for a few 88-mm antiaircraft guns, a handful of anti-tank guns, and a platoon of pioneers to assist them in taking a famous fortress, and then actually capturing it with no delay and relatively few losses.

The enthusiastic leadership of youth was one of the great features of our advance in the West.

17. ORDERS AND COMMUNICATIONS

Aggressiveness cannot serve as the sole principle of tactics without leading to disaster. German training supplements that principle with careful attention to all measures which provide that the action taken shall be considered and intelligent. These measures

include clear orders, and an efficient system of communications.

a. Orders

Subordinate commanders are expected to show initiative, but within the frame of orders received from the higher commands. This places certain requirements on these orders :

- (1) They should be clear and direct.
- (2) They should confine themselves to the main lines of a mission assigned to the lower command, giving the lower command latitude in the choice of means to execute the mission.

German training regulations devote a great deal of attention to the proper framing of orders. The Germans believe that one of the signs of deterioration in their armies toward the end of the First World War was the growing verbosity and ambiguity of orders. They propose to avoid these mistakes by constant drilling in conciseness and clarity.

One of the notable points in their doctrine here is the preference for verbal as against written orders. In training maneuvers, U. S. observers were repeatedly impressed with the fact that from regimental commands down, verbal orders were regularly used. One observer, visiting an Armored Troop School, was struck by the lack of reference in maneuvers to written orders (as well as notebooks, maps, overlays, and compasses) :

It is believed that the procedure whereby all orders and instructions are given and repeated orally in the presence of all

unit commanders concerned is a matter of special training in the German Army. Such procedure enables each unit commander to understand the part his unit is to play in the general action. This facilitates coordination and saves time in the long run.

Another observer points out the degree to which German officers are instilled with the sort of mental habits that fit them for this phase of leadership. As a logical frame for issuing good orders, the commander must make an estimate of the situation in terms of his mission, must arrive at a decision, and must formulate a plan for carrying out this decision. Through many contacts, the observer found that this attitude is so thoroughly engrained in the German officer that he applies this frame of approach to every kind of problem, civilian as well as military.

No trained German officer (we are told) begins the day without a mission. If the mission has not been received from higher authority, he gives himself a mission for the day, and one which is definitely not a mere compliance with a printed schedule. The printed schedule is nothing but a time allotment or control. *He approaches each day's task as he would a battle, in order that eventually he will approach battle as he would a day's task.*

It may be said that no German officer or noncommissioned officer is ever without a mission. If a superior should direct him to state his mission—and that is frequently done—the junior is prepared to answer immediately and without hesitation, with a clear statement of his mission, his estimate, and his plan. This makes a habit of logical thought and decision, both of which are necessary to real accomplishment.

The manual of "Troop Leadership"¹ says on this subject of orders:

The order puts the decision into effect.

Clear orders are an essential for the frictionless cooperation of all commanders.

For the higher commander, the written order provides the foundation for the leadership. It is communicated to the lower units printed, in carbon copy, typewritten or written by hand, or by technical communication means. Frequently it is dictated over the telephone. In every instance the most sure and suitable method of transmission is to be chosen.

Ordinarily, lower commanders use the oral order. Their orders are written if the oral or telephonic order is not possible, or if the oral order is insufficient or there exists the danger of interception.

The more pressing the situation, the shorter the order. Where circumstances permit, oral orders are given in accordance with the terrain, not the map. In the front lines and with the lower commanders this is particularly the case.

With important orders it is often advisable to use two or more means of transmission.

It is easy to underestimate the time required to get an order through.

Too many orders, especially in battle, during which the communication means may miscarry, produce the danger of impairing independence of action of lower commanders.

An order shall contain all that is necessary for the lower commander to know in order for him to execute independently his task. It should contain no more. Correspondingly, the order must be brief and clear, decisive in tone and complete, adapted to the understanding of the receiver and, according to

¹ See pp. 291-294 of "The German Rifle Company, For Study and Translation," Information Bulletin No. 15, May 16, 1942, Military Intelligence Service, for a more extended translation of the sections in "Troop Leadership" (*Truppenführung*) dealing with the subject of orders.

conditions, to his peculiarity. The commander must never fail to place himself in the position of the receiver.

The language of orders must be simple and understandable. Clarity, which eliminates all doubts, is more important than correct technique. Clarity must not be sacrificed for brevity.

Negative expressions and changes lead to half measures and are objectionable. Exaggerations are equally bad.

Orders may bind only insofar as they correspond to the situation and its conditions. Still, it is often necessary to issue orders in uncertain situations.

If changes in the situation are to be expected before the order is put into execution, the order should not go into details. In great strategical operations, especially when orders must be issued for several days in advance, this avoidance of details is to be especially observed. The general intention is expressed; the end to be achieved is particularly stressed. In the execution of the impending action, the main instructions are given, and the immediate conduct of the engagement is left to subordinate commanders. In such a way is the order fully executed.

Suppositions and expectations are to be indicated as such. Reasons for the measures ordered belong only exceptionally in the order. Detailed instructions, covering all possible contingencies, are matters of training and do not belong in the order.

b. Communications

Closely related to the subject of orders is the problem of communications. The German Army has made the utmost use of all modern technical means to effect rapid and serviceable communications. But, in addition, German field training emphasizes the use of runners, and demands that higher commands keep as close to the front lines as possible. In this way, the

commanders (up to division leaders) can inform themselves most effectively.

The manual of "Troop Leadership" has a good deal to say on the matter of communications:

When an order or report is transmitted orally, the one hearing the order or report must repeat it to the issuing person. A person transmitting a written report should be instructed as to its contents, insofar as conditions permit. Officers transmitting orders should, as a rule, be instructed as to the tactical situation.

If possible, important orders and reports should be sent by officers.

When the order or report is especially important, or there is uncertainty of assured arrival, transmission by various routes is advisable. Under such conditions, or if the route is very long, it may be advisable to send officers protected by escort, mounted troops, or armored vehicles.

The commander must consider where his communication can reach the receiver, and he must instruct the bearer as to whom the message is to be delivered and the route he should follow. If necessary, a sketch of the route should be given. Attention should be called to especially dangerous areas. Sometimes it is necessary to specify the latest hour that the message must reach the receiver. The bearer must be instructed as to what he shall do upon delivering the communication.

Upon meeting seniors, mounted messengers keep their gait; to higher officers they report the destination of their message. As they ride by a march column they likewise report to the commander as well as to the advance (rear) guard commander; in serious or threatening situations they call out the contents of their message to the commanders and the troops. They must be instructed to ask for the location of the commander to whom the order is directed. Bicyclists conduct themselves similarly to mounted messengers. The contents of messages cannot often be demanded from motorcycle messengers.

Higher commanders and commanders of reconnaissance battalions are authorized to read messages passing them, but they must not unduly delay their transmission. Every element must assist in getting the message through, if necessary by providing transportation facilities. * * *

The choice of location for the corps commander should be based upon the requirement of the establishment of rapid and continuous communication to the divisions and the rear. He cannot rely alone on technical communications. * * *

Great distance, in spite of adequate communication facilities, lengthens the command and report line, endangers the system, and may lead to late reports and orders or even to failure of arrival. Moreover, great distance makes difficult personal terrain study and a personal knowledge of the progress of the battle.

As contact is gained with the enemy, it is better that the division commander be where he can observe. Therefore, he belongs early on the field of battle and in the decisive area. His location must be easily found, easily reached.

In attack, the division command post should be located as far forward as possible, yet so selected that the communication net to the side and rear is effectively shielded from hostile fire. To be desired are: observation of the battlefield, either from the command post or a nearby observation post, and the possibility of establishing an airplane landing field nearby.

18. KNOWLEDGE OF TERRAIN

The usual attention is paid in German training to correct use of maps as a basis for utilizing the terrain in maneuver. But the German doctrine is that *maps should be so thoroughly studied that they can be largely dispensed with during maneuvers.* An observer who commented on the small use of maps during tank exercises was told that the officer who must

constantly refer to a map for orientation purposes is considered poorly trained. The map, once studied, should be "carried in the mind rather than in the hand."

19. SURPRISE

During the training phase, the importance of the principle of surprise in combat is constantly featured. According to German doctrine, surprise depends on the use of secrecy, deception, and speed.

Secrecy depends on maintaining the strictest discipline among troops. German success in guarding large operations was demonstrated in 1940; although large numbers of troops were elaborately trained for the invasion of Norway, or for special operations like the attack on Fort Eben Emael, knowledge of their plans did not leak out.

According to German military authorities, the use of deception to achieve surprise is comparatively unexploited. Much training time is spent in practicing methods which will give false indications to the enemy; these include construction of dummy establishments and positions, camouflage, and the execution of false movements.

Speed of execution of any maneuver is an essential for achieving surprise. This principle is extended to artillery practice. An observer notes that as much importance is now put on the speed of opening fire as on accuracy, and as on the attainment of a heavy volume of fire.

Section VII. TRAINING METHODS

20. PHYSICAL CONDITION AND MARCHING

The importance of physical condition is fully recognized in German training doctrine. One of the services of the Hitler Youth (with its emphasis on sports) and the Labor Service is to furnish the Army with recruits who are fully conditioned and toughened. The training period is thereby shortened and made more effective.

A U. S. observer saw an infantry battalion on maneuvers in January 1940. With the temperature at 20°, the troops lay patiently in 4 inches of snow, waiting their orders, for over an hour. Many men had no gloves. This difficult period seemed to have no effect on their performance later.

Other observers of a German division in field exercises before the outbreak of war reported that fitness and endurance were made a fetish by both officers and men. For training purposes officers often went 24 hours without food. Troops carried heavy loads of mortars, machine guns, and other equipment as far

as 1,200 yards in fast rushes of 50 yards. Just before the exercises, one engineer battalion had marched 85 miles through mountains in 3 days.

Good physical condition has been a basis for the notable march achievement of German infantry. Despite all the mechanization of modern armies, German doctrine foresaw the possibility that motorized personnel might lose their equipment and have to move rapidly on foot. In some cases German troops, under the prolonged strain of combat operations, have covered 30 to 40 miles a day for several days, and German sources claim a march of 44 miles in 24 hours during the Polish campaign. Reserve and Landwehr formations (of older men) are held to nearly the same high standards.

Despite these achievements, demand is made for even greater attention to march training. An article in a German military review (1940) states:

Peace-time marching practice, though good, was not strenuous enough to prepare men for war-time marching conditions. In peace-time marching, too much consideration is given to the comfort and convenience of troops.

21. EMPHASIS ON FIELD EXERCISES

Even the training at the German General Staff School avoids abstract theory in tactics and strategy. The student is thoroughly grounded in the fundamental principles of tactics; but he is taught to apply them concretely by the case method, in which a specific situation must be stated and solved. Tactical training at the school is given almost entirely by

means of free maneuvers on the map and on the ground. No fixed divisional organization is used in this training, and the combination of arms in a division is continually varied. The exercises are so conducted that the officer-student (as commander) and his staff oppose either the instructor or another student group. The student is given very little information of the enemy positions and is required to make immediate decisions, put into verbal orders. Movement is controlled by factors of time, space, terrain, fire power, and mobility, and by no other control features. Coordination of effort is assured by staff action during movement rather than by attempting elaborate plans in advance.

Field work is given central emphasis in the program of training for troops. Small units carry out tactical problems day in, day out. Tactical exercises fill half of the training time. As soon as possible (often within 6 weeks' time) new recruits are taking part in field maneuvers that involve units as large as a division, and that include all branches (assembled on the task-force principle). The ideal before the war was that no German unit should take the field until it was thoroughly trained, the Germans having profited by the lessons of the First World War, when they found that half-trained troops accomplished less and suffered greater losses.

The concept of war-time training was stated in a German training directive (1941) as follows:

In spite of greater difficulties than in time of peace, training must be conducted as thoroughly and methodically as possible.

It is only by inspiring a desire for intellectual cooperation, and by constantly keeping it alive among the lower ranks, that the correct tactical conceptions can be successfully inculcated in the ranks down to the most humble non-commissioned officer.

22. REALISM

No element of training doctrine is given more stress than the demand for a maximum effect of realism.

Clausewitz, the guide of so much modern military theory, stated the principle very exactly at a period when the methods and techniques of warfare put less strain than they do now on troops entering battle for the first time:

No general can supply his army with war experience, and the substitute of peace-time drills is a weak one when compared with the actual experience in war. It is much more important that peace-time drills be so arranged that a part of the causes for friction occur, and that the judgment, the wisdom, the prudence, and the decision of the individual leaders are tested, than is believed by those who do not know this from experience. It is of utmost importance that the soldier, of high or low grade, no matter what position he may occupy, should experience those difficulties which perplex and surprise him in actual war. If they have happened to him but once before, he is already somewhat familiar with them. This even applies to physical strains. They must be practiced—not so much that nature, but that the brain becomes accustomed thereto.

The Germans have gone to great trouble and expense to carry out this principle in training.

For one thing, troops in training exercises are provided with large amounts of practice ammunition of all sorts, including grenades, usually with reduced charges but nevertheless requiring careful handling and involving some risk. Machine guns fire ball ammunition over the heads of attacking troops, with very small safety margin, and trench mortars support the infantry to within 50 yards of its objective. A German officer of engineers told an observer that "we have considerable losses in war-time training, but this is unavoidable in familiarizing men in the handling of explosives, and in becoming expert. The men know that losses in training would mean fewer losses in battle."

In field exercises, the enemy is always represented by actual soldiers who advance and retreat, delay, fire blanks, and otherwise conduct themselves as an enemy should. Barbed wire, shell-holes, trenches, artillery emplacements, and all the other features of actual combat are introduced as far as possible in every exercise.

The handbook on "Squad Combat" says:

One should use real troops as much as possible to represent the enemy. The soldiers will be much less likely to make mistakes in war-time if they see during their training, instead of a dummy, a real and active enemy.

The greatest attention is paid to selection of competent umpires, and very careful directives are issued

for their guidance. An example of such a directive, and one that suggests the thoroughness and realism of training, is given in Appendix A.

Films have been used for some time in various stages of training, although our observers do not believe that their use has been developed as far as in U. S. practice. One film seen by an observer was designed to teach recruits the fundamentals of rifle firing, and used animated cartoons in a very vivid way to illustrate simple lessons, such as the effect of variations in muzzle velocity; the differences between high-angled and flat trajectories; the importance of rifling, etc.

The degree to which the Germans strive for realism is shown by the training of task-forces in terrain which approximates as nearly as possible to their prospective theater of operations. Rommel's Africa Corps trained in sandy areas of East Prussia, and Von Falkenhorst's mountaineers prepared for Norwegian mountain fighting in the Bavarian Alps.

23. THOROUGHNESS

Realism in German training methods is one aspect of their general demand for thoroughness. German officers in particular, and the enlisted men as well, are taught to regard themselves as men engaged in a highly skilled and honorable profession, and to take pride in acquiring the details of military techniques. To encourage this point of view, soldiers are put as little as possible on fatigue work and nonmilitary labors, which are performed by civilians.

Great effort is made to provide all ranks with professional military literature in attractive format. U. S. observers have been impressed by the wide use of these handbooks and manuals, and believe that military training is greatly aided by this practice.

In training exercises, every attempt is made to explain in detail what is going on and why, so that the interest of all officers and noncommissioned officers is fully enlisted.

24. MARKSMANSHIP

German training has tended to put emphasis on volume of fire rather than on accuracy. An observer believes that their ability to concentrate fire at a vital point is superior to our own, but that their standards of marksmanship are inferior.

However, a German article in late 1941 makes the point that volume of mechanical fire will not replace accurate individual shooting, and that sharpshooters can perform invaluable tactical missions. This may indicate that experience in Russia has led the Germans to place more emphasis than before on rifle practice.

SECTION VIII. GERMAN OFFICER CANDIDATES SCHOOL (1941)

25. INTRODUCTION

The following is an unedited report made by a New Zealand noncommissioned officer who evidently used his opportunities as a prisoner to excellent advantage. His account is an example of intelligent and careful observation.

The report illustrates a number of main features already mentioned in connection with German training: its realism; the high demands made on physical condition; training in communications, use of terrain, and concealment, etc.

One interesting minor point is that band music was used to lift spirit when the "going was tough." Music is not saved for parade formations.

26. TEXT OF THE REPORT

The cadets attending the school were recruited from the noncommissioned officers and other ranks of the various units stationed in Greece and were mainly ex-students of technical and other branches of higher education. The school was located at Patissia, near Athens. The training was spread over

a 3-week period, and the cadets were given very little time to themselves from daylight onwards. These men apparently were being rushed through to make up losses on the Russian front.

Of the theoretical side of their training I have nothing to report, as my notes are based on observations carried out from a neighboring rooftop with the aid of field glasses. Night exercises were also beyond my scope, but I observed that 3 evenings a week they remained indoors, where one could hear them singing Army and Hitler Youth marching songs. At least 1 hour a day was also devoted to singing on the march, and this period was treated as an important branch of their duties. The voices were good, and the tunes of a stirring martial type were so written that the beat of the music aided the rhythm of breathing, thus alleviating fatigue.

The physical-training periods were of a most strenuous nature, and a great deal of this was carried out in full battle order. For the most part the cadets were very young (early twenties) and the physical standard was high on the average. However, after the first week, many of them were limping and about 60 percent were wearing bandages. This was not surprising, considering the manner in which they vaulted over obstacles, climbed high walls, and hoisted heavy mortars to roof tops.

The various instructors conducting the course gave one the impression of knowing exactly what they were doing, and doing it with precision, force, and speed, unhindered by any scruple. Oral orders with special abbreviations were used during all stages of weapon training and battle practice, and a few sharp words were all that were required, even for complicated tactics. Each man repeated the orders and passed them along the extended lines of troops. One cannot overestimate the combination of skill and boldness which they brought to their tasks.

Aircraft cooperation, including tactical bombing, troop transport, and supply were fully explained by means of large

illustrated charts and demonstrations by trained parachute troops. The latter displayed their technique by jumping off the roof of a speeding army bus in full kit (the parachute open and trailing behind them). The dropping of supplies was carried out in the same manner. Truckloads of men were also used to represent air-borne troops. In addition to standard paratroop uniform, the men carrying heavy equipment and mortars wore special knee and elbow pads to help break their fall. These were cut away after landing with the aid of a knife concealed in a special pocket about level with the right knee.

Supplies and equipment were then thrown off the speeding van in the same manner as the paratroop demonstration. The smaller containers were like the shape of a 250-pound bomb, while the larger ones—approximately 7 by 2 by 2 feet—were of round metal with a square wooden outercasing, complete with handles, folding wheels, and rubber tires. One man demonstrated that he could cast off the parachute and push even the heaviest of these under the nearest cover in slightly under 5 minutes.

Large charts showing landscape pictures of various types, including olive groves, wheat fields, ploughed ground, and desert country were then unrolled and the cadets were divided into small groups, each party trying to make his uniform conform as nearly as possible with the natural features shown in the chart they had been allotted. Many excellent examples of concealment were produced with the aid of disruptive¹ smocks, natural material, and strips. Each man passed over to a new group when his instructor considered that he had mastered his first task.

Scouting demonstrations included the seal and side crawl, and the cadets were shown how to construct a fan out of heavy wire and scrap metal. This was heavily garnished and made a splendid bush. When held in front of the body and advanc-

¹Painted or colored in irregular, wavy, or zigzag patterns.

ing full in my direction, the only way I could detect the scouts was by sighting the bush with a match box. Several minutes later one could see that the bush in question was no longer in the line of sight. An oblique view disclosed one fault. Head and trunk were well concealed but they have overlooked their blackjack boots, and these gave away their position.

Snipers with special rifles, extra garnishing on their faces and clothing, and disruptively painted parachutes, rolled into the low scrub on the training area, pulled their chute in around their bodies and, with a few touches here and there of natural material, they were almost invisible.

Another group jumped with white parachutes, which they cast loose and roughly rolled, with the exception of one 'chute. This was spread out in the form of an arrowhead with the point facing toward the enemy. Ranges were then noted and the number 250 formed in the rear of the arrow with the aid of white ground-strips. A bombing flag was then spread out in front of their position. Signs were then made to indicate aircraft overhead. A red light was fired, and the noncommissioned officer in charge rolled over on his back, flashing signals with an electric lamp. A few minutes later the enemy was presumed to have been blasted out, and the whole group doubled forward to take up the new position which their dive bombers had cleared for them.

The next demonstration showed a section that had been cut off and surrounded by enemy troops. Inside the circle of their defenses, these men spread out a bombing flag (standard red, white, and black) with a ring of white material about 5 inches wide round it. This ring was constructed with ground strips and white under-vests which a number of troops stripped off their bodies in order to complete the circle. A flare was then sent up, and with the aid of a large chart the instructor demonstrated to the class how, following up on the signal, the bombers and fighters would circle around bombing and machine-gunning everything outside the defended area in order to break up the attack.

During the course, one of the most impressive displays was the efficient manner in which supplies of ammunition, mortars, and machine guns were passed up into forward positions. A small group under an officer crawled forward, selected a site for his company, and the main party crawled up behind them in two single files about 40 yards apart, twisting and turning as they took advantage of every bit of neutral cover until the head of each file contacted the scouting group. All open spaces were avoided and all ranks wore camouflaged smocks and helmet covers. When contact was established, the main body stretched on their backs with their heads between each others' knees, thus forming a living chain from front to rear. Then all equipment and ammunition was passed rapidly hand-over-head up the chain from rear to front and placed in position. The main group then crawled forward and spread out on the flanks.

During the recent Greek campaign we heard and saw much of the German mass attack methods. Hundreds of men were thrown away in an attempt to carry a position by sheer weight of numbers; but there were numerous other instances both in Greece and Crete where our men were suddenly subjected to a murderous attack from some unexpected quarter—usually to the flank or rear. The chain demonstration gives the solution and is worthy of study, since the method has distinct advantages in certain types of country, as any man who has tried to crawl quietly through dense scrub while encumbered with heavy equipment will readily testify.

It is unfortunate that other aspects of the cadet training were dealt with indoors or carried out beyond my field vision, but I trust that the comments set down above may prove of some value. One significant thing that stood out to my mind was the fact that during the many hours spent watching these people not once did I see a bayonet or gas drill. Gas masks were certainly carried, slung on the back, but they were never opened or even mentioned.

Appendix A. MANEUVERS AND FIELD EXERCISES; UMPIRE TRAINING¹

1. PURPOSE OF MANEUVER

a. Training in leadership—with a corresponding freedom in the development of the course of the maneuver (seldom attainable).

b. Troop training in the execution of definite, planned tactical measures—with a corresponding definite course which the chief umpire carries out according to his “predetermined plan of maneuver.”

The “predetermined plan of maneuver” guides the course of the maneuver from beginning to end. Thus, the participating troops are given practical training in executing desired specific missions. For example, a platoon mission: “Attack from 400 meters to break through and defend against counterattack”; or a battalion mission: “Deploy as necessitated by hostile fire. Prepare to attack.”

¹This appendix gives the translation of a recent article (1941) by a German major who had apparently had considerable experience in training infantry units in field exercises. He goes down to details in the problem of umpiring small units, and his article gives considerable insight into the nature of German field training.

The translation is followed (paragraph 14) by valuable comments of a U. S. observer who had much experience with German training methods.

The purpose of a maneuver is accomplished by "hostile activities" or by "situations" created through orders or reports transmitted through the chain of command, and by the realization of combat conditions as described by either Blue or Red umpires. Therefore, the successful conduct of the entire maneuver, and its training value, depend on the umpire.

2. GENERAL MISSIONS OF UMPIRES

a. Describe or announce the nature and effects of hostile and friendly fire;

b. Assess casualties;

c. Create impressions of combat conditions;

d. Announce or transmit situations, always within the planned scope of the maneuver;

e. Prevent violations of procedure;

f. Insure conformance to general safety regulations.

g. Conclusion: Every maneuver is completely dependent on the interest, agility, attentiveness, imagination, and general ability of the umpires. The umpire is always to blame if so-called "screwball" situations and unrealistic conditions arise.

3. ORGANIZATION OF UMPIRE STAFF

a. Distinctive Marks

White arm-bands, white head-bands (also for horse-holders, chauffeurs, etc.), and white flags on vehicles.

b. Formation

There should be a senior umpire on each side. There should be at least one mounted umpire (officer) with each battalion. There should be an umpire (non-commissioned officer) with each platoon and important reconnaissance party, and at each important terrain feature. The number of umpires assigned to exercises involving individual and group training will depend upon the merits of each case.

c. Choice of Umpires

The best! They should be thoroughly experienced and able to guide the maneuver along the proper course. They have a great responsibility! It is obvious that provisions must be made for trained capable replacements for umpires. The umpire detail list should be posted at least the day before the maneuver.

d. Conduct

Uniform same as troops; also same discipline (i. e., with respect to eating, smoking, etc.). They should not reveal themselves before contact with the enemy is established. Afterward, they should not disturb the picture unnecessarily. They should maintain communication with the senior umpire; report without revealing position; keep constantly informed concerning intentions, disposition, and action of own troops; keep informed on the further course of the maneuver, especially the hostile situation and the effect of hostile fire; and request information and or-

ders from the senior umpire. After maneuver, they take charge of their own troops.

e. Activities

(1) Before umpire conference: work out situation and maneuver plan, and outline the situations on maps.

(2) In the umpire conference:

(a) Report according to unit.

(b) Memorize projected maneuver plan, ask questions, make notes.

(c) Make note of times when special missions are to be executed.

(d) Determine amount and nature of maneuver equipment required.

(e) Establish communications with adversary when expedient. Arrange meeting place with superiors, etc.

(f) Just after umpire conference: secure maneuver equipment.

(3) During the maneuver:

(a) Report to all unit commanders and umpires, and request instructions without revealing position.

(b) Constantly observe own and hostile troops.

(c) Listen in on orders.

(d) Announce effectiveness of fire of own unit.

(e) Announce effectiveness of hostile fire.

(f) Announce casualties of own troops (never those of hostile troops) in accordance with maneuver plan.

(g) Penalize incorrect behavior of own troops with casualties.

(2) When necessary, report location of own fire impacts to umpire with appropriate hostile unit.

(i) When necessary, report improper action of enemy to hostile umpire concerned.

(j) Train own troops by injecting minor situations but without interrupting general course of maneuver.

(k) Transmit the general instructions of the senior umpire and call them out as they would be in actual combat, or so that they may be heard. For instance, if instructions are for a number of individuals, shout as loudly as possible so that they may be heard by all; if intended for only one person, give them quietly. When necessary, and in appropriate situations, the voice should roar like the hostile fire itself.

(l) Report the type of chemical-warfare agents not already clearly indicated.

(m) Instruct individuals in proper behavior when wounded, or in proper procedure in case comrades are wounded.

(4) Means and equipment:

Voice, flags for fire effect, flags to represent enemy, small smoke grenades to represent own shell impacts in enemy lines, fire crackers to represent hostile artillery fire, training gas. All means are usually available in very small quantities; therefore use them sparingly and make up for scarcity with voice.

4. UMPIRE REGULATIONS AND EXPLANATIONS

a. Behavior before contact with enemy: keep completely concealed; report to superior at command post. Behavior when in contact with enemy: proceed to the front, or run up and down own lines when reporting location of fire impacts.

b. Order simulated casualties. Casualties may be informed of the following:

(1) Type, intensity and direction of fire.

(2) Nature of injury. (Do not always say "dead" — "unconscious" is also suitable.

(3) Length of time casualty should remain prone.

(4) Disposition of casualties, or their action after designated time.

c. Signs designating disabled combatants must be put on immediately. Strict disciplinary regulations must be put into effect. Report infractions of these regulations.

d. Do not hesitate to report casualties. Casualties give a good idea of the combat situation, necessitating the employment of reserves so that these are also trained; moreover, the troops become accustomed to casualties, which are to be expected in combat; also, troops in rear of assulting elements are trained in proper precautionary measures and in proper behavior during combat.

e. Leaders should be put out of action for only a short time, or by special order from the chief umpire.

f. Often "situations" are given only to observation personnel, patrols, or security groups in order to cause them to report, thus initiating desired action.

g. Umpires must accompany patrols; platoon umpires are usually available for this purpose.

h. Umpires should never say: "Nobody can advance beyond this point." Such a remark is an indication of stupidity and lack of imagination.

i. No prisoners should be taken.

j. Wires should not be cut.

k. Mounted and armored-car reconnaissance patrols should be kept out of action for only a short time; they should always be given repeated opportunities for activity and training.

l. It is forbidden to throw fire crackers, smoke candles, etc., in the immediate vicinity of men and animals. Before such equipment is used, the troops must be instructed in their application.

m. Blank cartridges and maneuver-cartridge precautions: do not use them in villages. Fire high at night and in woods. Safe distance from blank cartridges—25 meters; from maneuver cartridge—100 meters. Set no fires with Very lights. Do not point bayonets at individuals.

n. It is forbidden to dismantle equipment. For example, do not remove ignition keys.

o. Smoke candles indicate location of artillery fire, as a result of which the opposing side advances.

p. Fire crackers are inappropriate for simulated artillery fire.

q. Flags to indicate fire effect are meaningless when used alone. The following information concerning the effect of the fire should also be announced:

- (1) Direction of fire.
- (2) Kind and intensity.
- (3) Duration (beginning—end).
- (4) Exact location.

The main value of the flag is to indicate to the adversary the location of his (adversary's) fire.

r. The command "shells!" is a substitute for the noise of passing projectiles, indicating that the troops should throw themselves down into prone position. The command "impact" is a substitute for detonation, indicating that movement should be resumed.

s. Damages resulting from shell fire and shell craters should be announced.

t. A brief description of the situation should be announced continually (every 5 to 10 minutes).

u. Enemy troops designated by flags should be described in detail.

v. Objectives that are recognized and placed under fire should be announced to opposing umpire (in some cases).

w. Equipment may be announced as disabled, provided such procedure causes no interruption in the maneuver and something can be learned thereby.

x. Announce direction of hostile fire, smoke, location of gun, and ricochet marks on the ground.

5. HOSTILE FIRE AND ITS EFFECT

a. It should be remembered that artillery is the only weapon that fires without direct contact with the enemy and without observation (fire by map).

b. Artillery and all heavy infantry weapons may fire a barrage, but only at night or in fog. This fire also is unobserved. It is restricted to designated time limits.

c. Ranging: artillery, mortars, and infantry guns must find the range. From two to five single shots are necessary for this purpose. First the objective is "bracketed" (single rounds in front of and beyond the target); if a machine-gun crew notices that it is "bracketed," it may have to change its position. The "bracket rounds" fall 400, 200, 100, or 50 meters from each other; and, in the case of heavy weapons, 160, 80, or 40 meters.

d. Surprise fire may be executed in accordance with (a) above (from map), or on targets near the point where registration has been effected. The fire units (battery or infantry-gun platoons) cover impact areas as follows, depending on the disposition of gun positions: battery front, 150 meters with natural dispersion, single shots as much as 200 meters; infantry-gun platoon front, 5 to 50 meters, single shots as much as 100 meters; the effect of fragments must also be considered. A battery usually fires on an area equal to its front; whereas an infantry-gun platoon usually fires with all muzzles directed at a single target (fire concentrated at one point).

e. Indication of shells: Usually shells are heard approaching, but often too late because the terminal velocity is greater than the speed of sound. The same applies to the sound at the gun. The speed of sound is 333 meters per second.

f. Fire effect of projectiles: 30 to 100 are sometimes necessary to register a direct hit in a resistance nest. Therefore, in a shelter pit one is practically safe from projectiles with percussion or delayed-percussion fuzes. Ricochet or time-fuze bursts may project fragments into the shelter pit from above. However, this is seldom possible. Fragments fly at right angles to the trajectory (like bicycle spokes). Therefore, only a fraction of the entire projectile is effective in fragmentation effect; two-thirds of the fragments are ineffective. Fragmentation effect is great in woods because there the effect is similar to a ricochet (detonation in the trees).

g. Mortars: projectiles are hardly audible.

h. A covered position is safe from ricochets and time-fuzed projectiles.

i. Heavy machine guns fire continuously. They sweep the entire target systematically. They are effective up to 2,500 meters. Troops should take advantage of firing pauses and stoppages. Concealed firing positions are possible. Fire protection for heavy weapons is necessary. Troops under fire should advance by bounds.

j. Light machine guns fire in bursts. These weapons are effective under 1,200 meters against large targets and under 800 meters against small targets.

Light machine guns protect one another; single machine guns work their way forward, assisted by hand grenades.

k. When confronted with air chemicals or smoke, as well as unknown odors, troops should put on gas masks.

l. When confronted with terrain chemicals, troops should halt, send out gas scouts, decontaminate, detour, or go through.

m. Tanks: their fire is effective usually only when stationary. They operate also according to the principle of "fire and movement." Troops confronted with armored reconnaissance cars should lay live and dummy mines. Troops confronted with tanks should signal all defense weapons. In every case open fire as late as possible. Effective firing range and types of ammunition should be considered. Tanks can operate through woods, but not swamps and boggy ditches. Steep slopes only hinder but do not stop tank movement.

n. Troops confronted by hostile aviation should observe identification marks, and fire only upon command. Fire is unnecessary in case of a single alarm. Aerial bombs and plane weapons are effective on columns and troops in assembly areas.

6. SAMPLE ANNOUNCEMENTS BY UMPIRES DURING AN EXERCISE

a. "Over there near the bridge—400 meters—four shell impacts close together—four more shells impacts—another four."

b. "In that wood about 800 meters away an artillery piece is heard firing, apparently from the direction of the village."

c. "A shell strikes 300 meters in front of you." Two minutes later—"Shell coming; impact 100 meters behind you."

d. As soon as a rifle platoon attacks: "Continuous machine-gun fire from direction of large house; fire from four guns striking all around us." As soon as platoon is under full cover: "Machine guns silent."

e. When anyone exposes himself: "Machine-gun fire sweeping directly over you." "Machine-gun fire striking right in front of you; No. 2 rifleman nicked in shoulder by ricochet; No. 1 rifleman disabled for 15 minutes."

f. "Bursts from a light machine gun striking here and there (pointing) in your immediate vicinity; fire apparently coming from direction of cornfield." "Machine-gun fire has ceased."

g. "Enemy attack-plane, flying low, approaching from right front, fires at column and disappears to the rear."

h. "Airplane motors can be heard." "One airplane to the south. Too high to identify."

i. "You see drops of oily liquid on the grass."

j. "You notice an unfamiliar chemical odor."

k. "A shell fragment smashes the longitudinal spirit-level."

l. "You have only 50 rounds left in your belt; the boxes are empty."

m. "Our own machine guns fire continuously over you to the left. These guns are apparently behind you. No. 3 rifleman receives a grazing hit in the ear."

n. (Aside to squad leader during hostile machine-gun fire.) "You have been hit—you are unconscious." (How does the squad react?)

o. "You hear a 'gas whistler' ('Pfeifpatrone')¹ from over there."

p. "Our own artillery fire is now falling along the edges of the woods over there."

q. "Heavy machine-gun fire is heard on your right." "You see the impacts throwing up dirt near the hostile machine-gun nests which have been holding up your advance."

7. COMMON MISTAKES OF UMPIRES

a. Ignorance of situation, projected course of maneuver, and own missions.

b. Inaction or insufficient emphasis on clear description of hostile fire, or failure to report to superior umpire or directing officer.

c. Calling out: "You can't advance beyond this point."

d. Revealing projected course of maneuver. This is detrimental to the training and fighting efficiency of troops.

e. Insufficient comprehension of projected course and purpose of maneuver. In every situation the

¹A "Pfeifpatrone" is a pyrotechnic sound-signal which is used as the principal gas alarm in German field operations away from permanent installations.

umpire must know if, how, from what direction, and how long fire should be delivered; the number of casualties; and what measures his injected situations should cause the troops to take. He should also know what should be done in case the enemy attacks, etc.

f. In defense situations: assessing too few casualties, before and during hostile attack.

g. The same applies to attack situations.

h. Permitting a long exchange of fire without deciding who is the victor.

i. Giving hostile fire data to leader only, instead of aloud so that all can hear.

j. Conspicuous behavior, thus revealing the situation.

k. Failure of mounted umpire to report promptly his own fire to opposing umpire, if latter's troops act as if unaware of this fire.

l. Vague exclamation: "Shells falling here," instead of detailed information as to arrival, number of shells, point of impact, duration of fire, type of fuze, and caliber. Above all, intensity, area, and time limits should be given.

m. Failure to report to superior umpire concerning any independent measures and intentions.

n. Vague exclamation: "Machine gun fire has ceased." He should say: "Hostile surprise attacks have ceased." ("No more bursts of machine-gun fire are expected.") When the troops have no cover, or their cover is only simulated, he should say: "If you move, you will be fired at."

o. Shouting: "Enemy withdrawing" instead of "No. 1 rifleman, you see a hostile soldier running toward rear * * * etc."

p. Shouting: "Gas" instead of "You smell mustard."

q. Permitting an attack to succeed without fire protection, without advancing by rushes, without individual soldiers working their way forward, or before the enemy withdraws or suffers severe losses.

r. Failure of mounted umpire to inform all umpires immediately as to situation and pending missions. (He should use the signal: "Leaders come to me.")

s. Failure to listen to the orders of the platoon commander.

t. Failure to observe the troops uninterruptedly.

u. Mounted umpire permitting opposing troops to gather in numbers within reach of each other without digging in (simulated), or without being put out of action.

v. Shouting: "Take shelter," or "Shoot," when an enemy machine gun fires somewhere with blank cartridges. Instead, he should make a remark such as "Bullets are whistling around you."

w. Divulging knowledge of terrain, or showing a map to the troops when they have no maps at hand, or when they are forbidden to use maps.

x. Crossing railroads except at designated crossing points.

y. Disregarding safety regulations.

z. Permitting troops to expose themselves without taking corrective measures.

aa. Failure to cause machine-gun barrels to be changed at appropriate intervals, even when firing blank ammunition.

bb. Stopping troops by shouting: "Shells are falling here." He should say: "Intense machine-gun fire—bullets throwing up ground all around us," or "Shells are falling 50 meters ahead of us."

cc. Shouting: "Machine-gun fire" instead of "Uninterrupted intense firing," or "Bursts from two or three machine guns are striking here (pointing), the bursts getting closer."

dd. Dulling enthusiasm of troops by restraining measures during hot and courageous pursuit of a beaten enemy.

ee. Permitting troops to halt and remain inactive without calling out "Artillery fire," to force them to dig in.

8. THE UMPIRE CONFERENCES

The umpire conferences are secret. When an umpire discloses the discussions therein to the troops, he impairs their training and fighting efficiency.

As soon as the projected course of the maneuver and his missions are explained, the umpire should consider immediately how they can best be carried out; what assumed situations and explanations concerning them should be made; what means are available; what restrictions should be placed upon the

troops; what factors might alter or impede the projected course of the maneuver, and how these factors should be eliminated; what additional instruction can appropriately be given to the troops; and on what additional points the troops should be checked. All misunderstandings should be cleared up immediately.

9. CONSIDERATIONS FOR UMPIRES AFTER THE UMPIRE CONFERENCE BUT BEFORE AND DURING THE MANEUVER

The following is a check list for use in giving instructions to umpires. It is arranged according to tactical situations.

a. Reconnaissance

How far should it extend? Who should be allowed to participate, and who not? Should it be partly successful? (Consistent with the projected course of the maneuver.) Should it (when capable of combat) overcome hostile security?

b. Security

How long should it repel hostile reconnaissance? Should it attempt to repel hostile reconnaissance at all? Should it retreat? Where retreat? When retreat?

c. Deployment

Deployment from the march should be initiated when the first hostile shells come over. Further deployment occurs as hostile fire becomes increasingly

effective. When encountering aimed small-arms fire, troops should advance, using available cover, and search for areas weak in hostile fire. In case of a hostile air attack, open fire on command with at least one-third of all weapons.

d. Assembly Position Prior to Attack

Always dig in. Should shelters be destroyed by hostile fire effect? All combat reconnaissance requires an umpire. Is enough ammunition on hand? Vehicles should be parked so as to be able to move out toward enemy.

e. Attack

Normally, as soon as the point has crossed the edge of the assembly area toward the enemy, hostile fire begins:

(1) At first, at considerable distance from the hostile MLR; later nearer; and finally there should be a wall of artillery fire (at night, barrage fire) just in front of the hostile MLR. There should be gaps in this fire, and areas where only a few shells are falling. Troops rushing forward should make use of these gaps and the areas where but few shells are falling.

(2) At 2,500 meters from the hostile MLR the troops encounter bursts of machine-gun fire, then continuous machine-gun fire (troops should advance by squad rushes).

(3) At 1,200 meters from hostile MLR, attackers should encounter bursts of fire from light machine

guns (at 800 meters, hostile light machine guns fire at will.

(4) At 400 meters from hostile MLR, attackers encounter rifle fire (attackers must work their way forward individually).

(5) Close-range combat.

(6) Enemy may intentionally open fire late under certain conditions (such as open field for fire).

(7) Other points to be considered by umpires with attacking units:

(a) Are hostile security measures diminishing?

(b) Is the enemy firing from positions organized in depth?

(c) In what direction is the enemy firing?

(d) In what direction is he not firing? (In such cases, only the reports at the gun can be heard; hence the umpire must call out the location of the impact area and the effect of the fire so loudly that everyone can hear.)

(e) Never allow troops to advance without fire protection, even when the enemy is weak.

(f) When 400 meters or less in front of the enemy, individuals may work their way forward assisted by protection of light mortars.

(g) Light machine guns, heavy mortars, antitank guns, and infantry cannons may assist in fire protection up to 1,200 meters from the enemy.

(h) Heavy machine-gun squads, heavy mortars, and infantry cannons may assist in fire protection up to 2,500 meters from the enemy.

(i) Above 2,500 meters, heavy machine-gun platoons, infantry cannons, and artillery may assist in fire protection.

(j) If more or fewer than the normal number of these weapons are required to furnish the necessary defensive fires, this fact will be mentioned in the umpires' conference.

(k) How successful should the attack be?

(l) Should there be hostile air attacks?

(m) Should gas be used? If so, why? If gas is used, the alarm should be rapid. Gas sentries should function. Masks should be put on quickly.

(n) Should troops dig in when their advance is held up? If so, should they actually dig in, or only outline their shelters to prevent damage to the fields?

(o) Are hostile counterattacks successful?

(p) Should casualties force employment of reserves?

(q) Should lack of ammunition force units to send for more?

(r) In what direction do own weapons fire?

(s) Where are the gaps in the friendly fire? In case of insufficient pioneer matériel and ammunition, the locations of the muzzle blasts should also be called out.

f. Defense

(1) There should be umpires with all combat outposts and reconnaissance parties. Combat outposts should not deliver too much fire, so that they can fight

the enemy a long time before being discovered by him. They work their way back in leaps and bounds and under fire protection. Assess casualties.

(2) The MLR should hold out under the strongest fire even under air, gas, or tank attacks. When defenders withdraw from MLR, they move at top speed. Whoever leaves his post without permission should be "threatened" with execution. Troops should make appropriate use of all agencies and facilities (such as camouflage), clear firing field, construct shelters, establish communications, distribute ammunition, and estimate ranges. All of this should be carefully observed. Causing troops to simulate prisoners is forbidden, as this is unbecoming to German soldiers.

g. Combat in a defensive zone organized in depth

Always allow stubborn nests to revive as an inducement for training in cooperation of all weapons. This cooperation should be initiated by messages requesting fire assistance or the attachment of heavy weapons.

h. Pursuit

- (1) To what extent is it successful? Indicate the actions of superior officers arriving on the scene.
- (2) Permit daring and even recklessness.
- (3) Should weak or inaccurate fire be assumed?

i. Combat in woods

Should units advance through designated zones?

j. Mine barriers

- (1) Request pioneer platoons with mine-searching equipment, and also heavy weapons.
- (2) Where are the gaps in the barrier?

k. When attack is checked

Should troops dig in or keep up the fire?

l. When attackers break contact and withdraw

- (1) What mission did the attackers have initially?
- (2) In case the attack was interrupted too early without waiting for or fighting with the enemy, send the attackers back.

m. Dummy installations of all kinds

- (1) Reward the units constructing them by assigning casualties on enemy side.
- (2) Announce the fire that such installations have drawn from the adversary.

n. In all situations

- (1) Are measures for reconnaissance, security, observation, communications, reporting, being carried out?
- (2) Consider how you can "show up" inadequate measures by injecting minor situations, as a form of penalty.

o. Observations of enemy activity

Everything should be recorded with time notation.

p. Ammunition

Amount of ammunition used (probable percent), and targets fired at, should be recorded exactly.

q. Firing Instruction

In the interest of firing instruction in mortars, infantry guns, and machine guns, one should not say: "Your impact area is 5 mils too far to the right," but "Your impact area is at that lone tree to the right of the target."

r. Fire Data

Ranging, fire distribution, recognition of targets, target designation, and transmission of fire data should always be carefully observed.

s. Conduct at Night

- (1) Absolute quiet.
- (2) Motionless when flare is fired.
- (3) It may be advisable to unload guns.

10. UNIT PROCEDURE AND CONTROL BY UMPIRE SITUATIONS**a. Introduction to combat:**

- (1) Distant artillery fire.
- (2) Report on nature and intensity of fire, and location of impact area.
- (3) Rifle and machine-gun fire in close vicinity.

b. Development for action: Fire encountered as above but in the close proximity and eventually in the midst of the troops.

c. Prone position:

(1) Call: "Shells approaching."

(2) Call: "Machine-gun and rifle fire" to cause troops to take cover. Then return fire with fire and explosives, at same time digging in if fire protection is ineffective.

(3) All troops should be in prone position before a flare starts to burn.

d. Taking full cover:

(1) Should be accomplished in accordance with a and b above if no hostile movement takes place.

(2) When fired upon by surprise fire, take full cover if it can be promptly attained.

Note: When taking full cover, troops should not neglect to maintain observation of enemy, commander, and neighbors.

e. Digging in:

(1) Effective hostile fire from an unknown direction cannot be neutralized, at least not continuously. Assess large losses. Movement impossible.

(2) Troops in assembly positions must dig in, if receiving scattered artillery fire.

f. Change of position: Position should be changed if enemy is firing ranging rounds accurately upon it, providing new position can be attained promptly. Position should also be changed after effective surprise fire.

g. Continuation of movement permitted:

(1) After firing of own heavy weapons.

(2) During involuntary stoppages in hostile fire.

(3) If movement is into a lightly shelled area.

(4) If the enemy fire has diminished materially.

h. The entire unit should remain in place under cover:

(1) If hostile fire flares up repeatedly, if there are losses in the leading elements, or if leaders are casualties.

(2) If artillery or machine-gun fire is falling just in front of the unit.

(3) If the area has been gassed, unless an assault "regardless" has been ordered.

i. Withdrawal from area permitted (only upon command!):

(1) If enemy concentrates fire with much ammunition, especially in wooded area.

(2) If area is covered with mustard gas.

(3) If area is receiving poison gas.

(4) Under conditions in e above (digging in), if soil is too hard. Then retreat by rushes.

(5) Combat outposts withdraw if under the effective fire of an approaching enemy.

j. Group rushes used:

(1) During a machine-gun fire fight.

(2) On suitable terrain (shelter for entire group during rush).

(3) Between bursts or salvos in harassing fire.

k. Men work their way forward individually, when enemy is less than 400 meters away, even when the enemy is invisible. While advancing in this manner, these men should maintain fire on suspected hostile position.

l. Open fire when enemy (recognized or suspected) fires at ranges favorable for own troops.

m. Upon penetration of hostile position:

(1) Hostile fire ceases.

(2) Hostile casualties are announced.

n. In case of a successful hostile penetration: Announce many casualties in own troops.

o. Change of position by heavy weapons (including exposed positions):

(1) Announce destruction of cable connections by fire.

(2) Own front line should be near enemy.

(3) Own front line has reached designated objective.

p. Fire commands for heavy weapons: Announce location of impact points on terrain as in instruction firing.

q. Loss of leader and results: fire strikes leader so that he cannot speak.

r. Material and ammunition reinforcements and employment of reserves: Umpire should devise appropriate situations to necessitate such reinforcements and the employment of reserves.

11. MISTAKES, THEIR PENALTIES AND CORRECTIONS BY UMPIRES

The following mistakes are made repeatedly:

Bunching of troops (also staffs!)

Mistakes are penalized and corrected as follows:

Surprise artillery fire in vicinity.

<i>The following mistakes are made repeatedly:</i>	<i>Mistakes are penalized and corrected as follows:</i>
Bunching in woods.	Shells (exploding against trees).
Failure to camouflage (especially rangefinding instruments).	Sudden fire from heavy weapons, depending on range.
	Aimed single shots, depending on range. Send offenders back to camouflage (peace-time measures).
Foolhardy exposure in prone position.	Infantry-cannon fire (ricochet) forces troops to change position. Stop action. Send troops back and have them come forward again. Impose additional training after the maneuver. (It would be wrong to remove them from action, as this encourages laziness.)
Too long and too frequent machine-gun stoppages.	Casualties to neighbors from hostile machine-gun fire. Forcing offenders to take extra instruction after maneuver.
Lack of cooperation between squads.	Casualties in neighboring troops.
Lack of cooperation between individual riflemen and machine guns with regard to taking advantage of gaps in friendly fire and firing over the heads of our troops.	Casualties among own riflemen from own machine guns, and casualties in machine-gun crews themselves. Revival of enemy.

The following mistakes are made repeatedly:

The same between riflemen and mortar crews with regard to failure to observe time limits of fire, etc.

Unorganized advance of patrols (without fire protection).

Sluggishness in close-in reconnaissance.

Combat reconnaissance without fire protection.

Making a combat reconnaissance without informing own heavy weapons.

The same as above, proceeding unprotected or not attempting to draw out hostile fire (by firing or running back).

Individuals in prone position, without cover or camouflage on a skyline, less than 1,000 meters from the enemy.

Individuals in prone position without cover on a skyline, less than 400 meters from the enemy.

Assaulting a hostile position before all hand grenades have exploded, i. e., without waiting for the command of the leader.

Mistakes are penalized and corrected as follows:

Revival of enemy. Casualties from own shells.

Severe casualties in patrol, with exception of leader.

Own superiors come and hurry them up.

Own troops follow close behind.

Severe casualties in patrol, with exception of leader.

Casualties from own heavy weapons.

Severe casualties caused by surprise machine-gun fire.

Put them under machine-gun fire.

Put them under rifle fire.

Individual casualties through own hand grenades.

The following mistakes are made repeatedly:

Remaining prone on open, flat terrain in front of the enemy, without firing, without digging in, without seeking full cover, or without charging.

Digging in without flank protection against fragments.

Sluggishness in going into position, or failure to adjust sights.

Taking prone position or full cover and remaining there when hearing harmless machine-gun fire.

Unnecessarily taking a position at edge of woods, just inside of woods, or less than 20 meters from edge.

Taking positions individually at conspicuous rocks, trees, etc.

Bunching up behind rocks, single houses, etc.

Individuals advancing rapidly in exposed edge of woods or messengers, running parallel to enemy's front and within his view.

Messengers taking prone position beside leader instead of behind him.

Mistakes are penalized and corrected as follows:

Severe casualties, in spite of weak hostile machine-gun fire.

Casualties by fragments from flank.

Wounds from similar but more efficient enemy.

Give information as to location of hostile machine guns, and effect of its fire, and send offenders to proper position.

Place offenders under shell fire with detonations in trees.

Place offenders under fire from infantry weapons, depending on range from enemy and his strength.

Place offenders under high-angled fire.

Place offenders under fire of light machine guns.

A shell, which wounds both.

The following mistakes are made repeatedly:

Neglecting security and observation measures.

Troops abandoning their position and running to the rear.

Walking from the position of readiness instead of rushing; or too short a rush; or slow rushes.

Remaining prone on descending slopes during attack because enemy happens to be firing.

Putting on gas mask when hearing a distant warning.

Failure to notice mustard gas.

Failure to employ antiaircraft sentry.

Premature withdrawal of combat outposts.

Firing at a tank or aircraft before being certain whether it is friendly or hostile.

Taking full cover without maintaining observation of enemy, leader, and neighbors.

Mistakes are penalized and corrected as follows:

Hostile surprise attack.

Threat of own platoon leader to shoot them dead.

Assess casualties from concentrated accurate bursts of heavy machine-gun fire.

Assess especially severe casualties.

Let all men put on masks, then call out: "Gas sentry says: 'All clear!'"

Assess casualties from skin burns 1 hour later. A large number of men should have difficulty in breathing after a few minutes.

Air attack with casualties before antiaircraft defense begins to function.

Send them back by order of theoretical superiors.

Assess a court-martial.

Make casualty of leader.

<i>The following mistakes are made repeatedly:</i>	<i>Mistakes are penalized and corrected as follows:</i>
In position of readiness for attack: to expose oneself carelessly; to loud behavior; too bunched up at forward edge of position.	Assess casualties from hostile surprise fire.
Defending and thus revealing a position of readiness if there is a hostile air attack on front line.	Assess casualties caused by fire from hostile ground weapons.
Bunching up in clearings during combat in woods.	Assess casualties—also among vehicles and horses.
Deficient liaison and communications.	Assess fire from the flank.
Failure to draw out hostile fire.	Assess casualties from riflemen firing from underbrush and tree tops.

12. TRAINING WITH SAND TABLES

- a. An umpire conference is held in which a familiar former situation is discussed.
- b. Bring out the considerations listed in the above chapter.
- c. Run through the course of the maneuver with minor incidents; discuss measures which are taken by individual umpires.

13. CONCLUDING REMARKS

The above suggestions are intended to vitalize the work of the umpires. The suggestions are by no means exhaustive, as the material is unlimited. A good slogan for an umpire is: "No cut and dried plan!" The umpire should always ask why a soldier

has acted in a certain way instead of the way the umpire imagined the soldier should have acted. Do not be too ready to condemn.

* * * * *

14. COMMENTS BY U. S. OBSERVER

a. This article indicates the serious and conscientious efforts, especially on the part of the umpire, to obtain and maintain realism in German field exercises and maneuvers. The German umpire does not fulfill his mission by simply informing his unit or its leader that certain fires are being delivered, or that certain errors are being committed. In their field training, German troops are made to realize as nearly as possible under peace-time conditions the effects of various types of fire, the appropriate procedure to be adopted under different fire conditions, and the results of their own or hostile errors in procedure. Thus, in the German Army, a field exercise or a maneuver is a medium for giving the maximum combat training, rather than testing the training of troops and leaders.

b. Reports dealing with the action of German troops in combat indicate that they follow closely the training instruction received in their field exercises and maneuvers. As can be seen from this article, the responsibility for the value of this instruction rests largely upon the umpires. Therefore, the umpires must be thoroughly familiar with the projected maneuver plan and the training objective. They must

be more experienced, more competent, and even more energetic than the troops. They must possess a strong and tactful personality in order to be able to impose the restrictions resulting from erroneous action and at the same time retain the respect of the troops and troop leaders. They must use good judgment and common sense in imposing restrictions, but at the same time they must avoid dulling the enthusiasm of the troops by too many, or too severe restraining measures. Authority is a corollary to this responsibility. Bickering with umpires by troop leaders during an exercise is not tolerated, on the grounds that it destroys the illusion of combat.

c. German umpires are required in general to observe the same disciplinary restrictions concerning cover, concealment, smoking, lights, and similar matters, as the troops with which they are operating.

d. It is emphasized that the umpire must give information concerning hostile fire to the troops, as well as to the troop leaders. This is logical, because in combat the troops are equally aware of the hostile fire and its effects. Moreover, proper reactions cannot be expected from troops uninformed concerning the fire that is assumed to be affecting them.

e. Attacking German troops are trained to take advantage of their own supporting fires, pauses in hostile fire, and gaps between fires, as well as the cover and concealment afforded by the terrain, as they advance toward the objective. In certain exercises, particularly in the assault, where the enemy

is not represented by other troops, all of the infantry weapons use practice ammunition ("Uebungsmunition"). This ammunition has the same characteristics as service ammunition except that the charges are smaller. In the reduction of obstacles such as bunkers, machine-gun emplacements, barbed-wire entanglements, and road blocks, service munitions and explosives are used. Thus the troops are taught to observe caution with respect to their own fires and become accustomed to the noise and confusion of combat. During an attack, stress is always placed on keeping the enemy constantly under observation and neutralized by fire or other means.

f. It is noteworthy that the Germans ordinarily do not take prisoners during field exercises and maneuvers. The practice of taking prisoners lowers the self-respect of the captured individuals, diverts attention from the exercise, and adds nothing to the training of the troops.

g. In order to insure that the desired instruction is efficiently given to the participating troops, an umpire's conference must be held prior to a field exercise or maneuver. During this conference, the projected plan and situations are explained and staked out on maps, pertinent information is disseminated, and questionable points, including misunderstandings, are cleared up in the minds of the umpires.

h. The fact that German military journals have recently published articles on the umpiring service

in field exercises and maneuvers, and on the training of umpires, indicates that the efforts expended in developing realistic measures for handling this type of training have been repaid by favorable results on the battlefield.

Appendix B. COMBAT TRAINING OF THE RIFLE SQUAD¹

1. THE PREPARATORY WORK OF THE PLATOON COMMANDER

a. Plans

Preparatory to training the squads in combat methods, the company commander instructs the platoon commanders and platoon sergeants. He prepares in advance a training schedule for the period which the battalion commander has allotted for squad training—a period which, of necessity, is short in time of war. By giving his instructions in the field as well at the sand table, the company commander assures uniformity of the work within the company. It is well to begin this preparatory course of instruction while individual training is still in progress, so that squad training may proceed at full speed from the

¹This is the translation of a part of an article on "Combat Training of the Rifle Squad Within the Platoon," written by a German major in 1941. It is full of concrete suggestions of training methods for small units. Cf. "The German Rifle Company, For Study and Translation," Information Bulletin No. 15, May 16, 1942, Military Intelligence Service.

start. A well-organized training schedule will provide the time required for that purpose. Demonstrations held by the company commander personally, and performed by noncommissioned officers acting as the training unit, are the most effective means of showing the platoon commanders how the company commander expects the squads to be instructed. Therefore, the company commander himself decides what problem will be conducted each day. The purpose of the training must be perfectly clear in the minds of all; and the individual problems must be confined to the execution of small phases of the various tactical methods (attack, defense, combat in special areas). However, care must be taken not to practice the attack one day and the defense the next without adhering to some system. Closely defined training phases are, for instance:

(1) The attack from medium to close distance.

(2) The attack from the point at which the assault is launched to the penetration of the hostile resistance and maintenance of the captured position. Here, early use must be made of loaded hand grenades, flare pistols, and wire clippers.

(3) The attack from hand-grenade range, assault, and defense against a hostile counterattack. Again, early use of loaded hand grenades is essential.

(4) Action in the main combat area. This phase of combat must be emphasized; and maximum use must be made of loaded hand grenades.

(5) Combat of outposts.

One squad problem should not combine too many of these phases. The result would be that mistakes would not be corrected, and that the benefits derived from the exercise would be nominal. Generally, training should be based mainly on actions in which both flanks rest on adjacent elements.

b. Theoretical Instruction

The preparatory work of the platoon commander commences in the office and in the field. By no means may squad training be "improvised."

Preparatory instruction in the lecture hall must precede all training in the field. Training manuals, charts, and the sand table must be used to teach the platoon the combat principles and doctrines that are essential to the accomplishment of the given mission. It is important to imitate as closely as possible the true conditions of warfare. "What is taught and practiced in the field must be prepared, mentally absorbed, and confirmed through theoretical instruction."

The theoretical instruction must not be given in a narrow, schoolmasterly fashion, but must be animated and rendered interesting. It is addressed simultaneously to the squad leaders and their men, teaching them clear conceptions (combat principles) with the aid of examples taken from actual experiences in war. It presupposes that the platoon commander be thoroughly familiar with the contents of the training manuals. "Mental absorption and a thorough com-

mand of the subject of instruction on the part of the instructor." The instructor must be able to visualize clearly the course of an infantry action. The platoon commander must take this theoretical instruction most seriously; he will reap his reward later in the field. The use of training films facilitates the work of the instructor. In preparing himself for a period of instruction, the platoon commander must compile, in brief form, the paragraphs of the regulations which he will use.

c. Preparatory Work in the Field

The preparatory work in the field includes the selection of a suitable area offering a large variety of terrain features, that is, a terrain which permits of a continuous development of the given problem and corresponds as nearly as possible to the nature of the tactics employed.

Such a terrain is called an "instructive terrain," for it brings out clearly the object of the exercise. For instance, training the squad in the defense calls for a terrain which offers a wide field of observation and permits the delivery of effective fire into the hostile zone. Or, if the squad is to practice combat of outposts, the instructing platoon commander must not only select a suitable terrain in front of the outposts, but one which is suitable also in their rear. In other words, the terrain must permit a covered withdrawal of the outposts; and its conformation must be such as to enable them to resume action, that is, to go

into position and deliver effective fire, at every favorable terrain feature, while falling back on the MLR. The departure area of the squad should offer cover against observation and, preferably, also against hostile fire (woods and thickets, natural boundaries, depressions behind hills). For the attack itself, rolling terrain is most suitable; and small cover, such as thickets, woods, hedges, and barns is highly desirable.

Therefore, extreme care must be exercised in the reconnaissance of the terrain; and the zone of action must be checked from A to Z, beginning at the starting point of the exercise and ending at the objective. The platoon commander must walk the entire distance, not ride or drive; again and again he must lie down on the ground and examine the area through the eyes of the enemy. A general outline of the plan of the exercise thus takes shape automatically. Terrain features should not be assumed. It goes without saying that all who assist in the conduct of the exercise (the enemy leader, those who represent adjacent elements, and so forth) accompany the platoon commander on this preparatory ground reconnaissance. The occasional participation of a machine-gun or heavy-weapons officer, as adviser to the instructor, may be of great service. Important, further, is the time of day at which the platoon commander chooses to work in the field. The squad must not practice only in the clear morning hours. On the contrary, it should work also in the dawn of the day, in the full glare of the midday sun, in the dull light of the after-

noon sun, and in the mist and dusk of the closing day. It must be remembered that the constant changes in visibility have a tremendous influence upon the conditions of observation and combat. It is suggested that the platoon commander conduct one and the same problem several times at various hours of the day. He will readily find that the difference in illumination will favor now one side and then the other, depending upon the direction from which the light comes.

d. Plan of Action

The formulation of the plan of action divides itself into three phases:

(1) The establishment of the initial situation, which covers the sphere of action of the platoon as the next higher unit, must be brief and simple; contain the combat mission assigned to the squad; and describe the situation as it exists at the outset of the action. Here, as in all military training, simplicity is of primary importance. The initial situation in any case must state: the hostile situation; the mission of the platoon; the location and organization of the squad and adjacent elements at the time being; the mission of the squad; support by artillery and heavy weapons; and the position of the platoon commander, in his capacity of leader of the next higher unit. The description of the general initial situation gives the squad leader and his men a clear picture of the existing situation, with regard to fire and air activity. Good, complete platoon orders, assigning the squad a

definite mission and placing it into the midst of a combat phase, are a valuable springboard for the squad at the outset of the exercise.

(2) The plan of action must be based on the terrain, the effect of the friendly and hostile fire, the gains made by the simulated adjacent elements, and so forth. Its text must show, both as to time and place, the progressive development of the assumed fires and situations; the use of flags to represent fires; the employment of smoke producers, blank charges, tear and sneezing gases, and roadblock signs; the arrival of messages and orders; the occurrence of casualties; the falling out of the squad leader and the light machine gun; cooperation with heavy weapons; the appearance of friendly and hostile aircraft; the use of smoke screen and the gas mask; and the progressive maneuvers of the enemy, demonstrated by prearranged signals. Aircraft that happen to fly overhead must be included in the problem as either friend or foe. Nearby units may be requested occasionally to lend certain weapons, as, for instance, a tank with which to give a clear demonstration of the vital cooperation between infantry and tanks. An automobile may be transformed readily into a dummy armored car with the aid of pasteboard. One must be inventive and possess a good deal of imagination. During squad training, the men of the rifle squad should be introduced to heavy machine guns as often as possible; they should actually fire and not merely "assume" them. This will help the machine-gunners,

too. Field telephones and blinkers should be used frequently on problems, in order to prevent the unnecessary and careless "sacrifice" of runners—which to carry out certain functions, for once the effect of the hostile artillery fire cannot be truly represented by smoke producers and blank charges. For instance, it is difficult for the ear to imagine the swishing noise of the approaching shell. Therefore, a vivid, plastic description by the instructor is most essential in that connection, in order to enable the squad leader and his men to draw an approximately realistic picture of the physical and moral effect of the hostile artillery fire. It is advisable to prepare a simple sketch of the exercise area, drawn according to scale and with exact distances shown. The progressive course of action as planned should be indicated briefly on the margin, according to terrain features and boundaries. The sketch must show dead spaces, scheduled target areas, zones covered by friendly and hostile aircraft, wire entanglements, mine barriers, and gas zones.

(3) The enemy leader is the most important assistant of the instructor. He must be informed of the location and strength of his disposition which must conform to the conditions of actual warfare. He must be given an active assignment. An alert private, first class, functioning in that capacity, may be given a corresponding reconnaissance mission. The platoon commander later should examine the execution of that mission and make necessary changes.

An enemy on the defensive must not be installed too obviously in the terrain, in order to accustom the eye of the soldier to recognize a well built-in and camouflaged opponent who will present only momentary targets. The enemy must avoid congestions. The strength, armament, and equipment of the enemy must be represented by full-strength troops: if necessary, these may be supplemented by flags and silhouette targets only to a degree corresponding to the object of instruction. For example, if the squad is to execute a successful attack, the enemy must not be of equal strength; and his fighting power must gradually weaken, in order to permit a successful assault. Similarly, if the squad is fighting in the main combat area, the enemy must be gradually "stunned" so that the attacking squad may finish him off with the hand grenade and bayonet.

On the other hand, in defensive training, the squad must be attacked by superior hostile forces. In other words, the strength of the friendly and hostile forces must be weighed carefully against each other.

The instructions issued to the enemy and his disposition are of extreme importance and require thorough planning and preparation on the part of the platoon commander. The enemy leader must be given a combat assignment; and it is best to confine him to definite actions, corresponding to the plan of the exercise. The enemy shows himself and fires (delivering either strong or weak fire, or none at all

at first) at the time and place directed by the platoon commander. The enemy digs in, conceals himself, ceases fire, and screens his position by smoke to represent artillery fire on his position, in conformity with the plan of action. In the case of fire delivered by a hostile heavy machine gun, for instance, the instructor and his assistant use flags or a few words to indicate the area covered by that fire, showing whether the squad itself, or some adjacent element, is the target of the hostile machine gun. If engineer units are located in the vicinity, material may be borrowed occasionally to install blasting charges along the entire breadth of the hostile position and set them off by means of electricity. The fountains of earth rising into the air at the moment directed by the platoon commander will give a vivid illustration of the effect of the artillery fire on the enemy. It must be remembered that the spoken words of the instructor and his assistants remain but an expedient, a substitute for actual warfare conditions. Hostile artillery fire on the zone of action of the attacking squad may also be demonstrated in the manner described above. Communication with the enemy leader, required by the platoon commander for the purpose of making real the action of the enemy, is established best by means of prearranged signals (flags).

At any rate, this method of directing the enemy is better than to agree on certain hours and minutes at which to carry out certain functions, for once the

platoon commander interrupts the development of the problem by explanations and inspections, the time schedule is broken and confusion will be the result. Telephone and radio communication between the two sides help the platoon commander to maintain firm control over the exercise at all times. An atmosphere of true warfare conditions must pervade all of these measures. The enemy should fire blank cartridges. Finally, the platoon commander must have a clear idea of the time required for the execution of the problem.

2. THE PRACTICAL WORK OF THE PLATOON COMMANDER AS INSTRUCTOR

a. General

Once the platoon commander has prepared a written plan of the exercise, he distributes copies of it (indicating situation and plan of action) to his assistants and, in addition, furnishes the enemy leader a memorandum containing a number of questions which the enemy leader must answer during the exercise according to his observations of the squad under instruction. In this manner, the platoon commander gathers valuable data for his critique, for it is the only means of informing him what the enemy has observed—a factor which is of great importance for the critique. The day on which the problem is to be held, the platoon commander orders the elements representing the enemy to precede the unit to the training area and establish themselves in their de-

fensive positions. Thus two things are accomplished at one and the same time: no time is wasted in the field; and the establishment of the hostile position remains concealed from the squad under instruction.

b. Execution of the Problem

The platoon commander then proceeds with the execution of the squad problem according to the following method of instruction, always stressing thoroughness in execution:

(1) The platoon commander describes the initial situation clearly to the squad leader on the spot, speaking loudly enough for all men to hear him. He must learn to speak in the manner of the radio announcer who describes the dramatic course of a sporting event.

(2) The squad leader repeats the description of the initial situation. Doubts must be clarified.

(3) The platoon commander directs questions to the various men of the squad, so as to make sure that all men understand the situation. Next, he orders the squad leader: "Move into departure position under peacetime conditions."

(4) The squad leader orders his men to take up the departure position: "Our squad now will form as follows * * *." The departure position may be taken up also in the following manner, for example: "First squad, position behind this rise. Squad will face as I am now facing. As skirmishers." Next: "Full cover," or "First squad, position behind this

slope. Light machine-gun crew on the left, riflemen on the right, of the road. As skirmishers." Then follows an inspection of the departure position by the platoon commander. It is imperative that the movements be executed precisely as ordered.

(5) The squad leader develops the plan of action, in conformity with the mission assigned to him by the platoon commander. Care must be taken to grant the squad leader time enough to make deliberate decisions—a factor which is often disregarded. Even in war, there is usually time enough to deliberate. Undue haste easily leads to reverses. The progressive training in combat technique will teach the squad leader early enough to make lightning decisions when taken by surprise.

(6) Warfare conditions are assumed upon a whistle signal of the platoon commander, or a bugle signal.

(7) The squad leader issues his first orders expressing the plan of action. The instructor must give the squad leader time to put his initial instructions into effect.

(8) The situation of the squad within the framework of the platoon develops as planned. The exercise may be interrupted whenever necessary to discuss the phases executed at the moment. The pauses are announced by bugle signal and conducted under peacetime conditions (which is indicated by having the men remove their steel helmets). This method of interrupting the exercise for brief discussions is recommended especially for the first period of squad

training, in order to evaluate the impressions of the action while they are still fresh in the minds of the men, and to ascertain the "wrong" and the "right" of the orders issued by the squad leader and the conduct of the men, so that everybody—down to the last "buck-private"—will be able to understand the situation. The fire fight should be interrupted frequently and the men ordered to aim at the targets on which they have last fired. While this is being inspected, attention must be given to the setting of the sights. A hurried development of the exercise is harmful to the training of the squad.

(9) Conclusion of the exercise: the squad leader reports to the platoon commander: "Rifles unloaded. Light machine gun unloaded, released, and locked."

(10) The squad leader forms his squad and reports it to the platoon commander. The platoon commander, after a brief discussion with his assistants and the enemy leader, holds the critique at a place which affords a good field of view. His review of the problem proceeds in the following order:

(a) Purpose of the exercise.

(b) Brief description of the situation on both sides.

(c) Mission of the squad.

(d) Brief, yet clear, summary of the course of the exercise (no long-winded talk).

(e) Judging the conduct of the squad leader as the "foremost fighting man" and actual leader of his squad, stressing his plan of action, measures taken and orders given in the execution of the problem.

Has the leader correctly limited himself to issuing brief, calm, and definite orders; and has he led his squad, as much as possible, by personal example and signals (for instance, to follow, jump, rush forward)? Did the squad leader exercise fire control, and was it noticeable? Was the hostile area under constant observation (visual reconnaissance)?

(f) Judging details, with regard to the conduct of the riflemen and light machine-gun crew, for instance:

1. Did the men adhere closely to the prescribed direction of attack?

2. Did the men hold their heads high, eyes focused upon the squad leader and the enemy, while advancing?

3. How was the ground exploited during the advance? Was camouflage used?

4. How did the men go into position? Did they use their intrenching shovels? (The shovel occupies a place also in the attack, for a good and timely use of the shovel is a life-saver and helps to maintain the fighting power of the squad. To quote from the German Infantry Journal, April 1939, a company commander says: "The soldier who digs fast gets more out of life.")

5. How did the squad behave during the fire action? How was the fire discipline in general? Did the squad open fire earlier than necessary? Did the men remember to change their sights during the forward displacement?

6. Did the men guard the muzzles of their rifles?

7. Were stoppages of the light machine gun eliminated under cover?

8. Did the men expose themselves and present targets to the enemy unnecessarily?

9. How did the men behave under hostile artillery and machine-gun fire, during the gas barrage, and in the presence of hostile aircraft? Did they make use of the gas tarpaulins?

10. Did the men avoid congestion in the zone of hostile fire?

11. Did the squad take advantage of the protective fires of the adjacent elements, friendly artillery, and heavy weapons and move forward with lightning speed and determination? The main thing is to teach the men to rush forward.

12. At what points were long, and at what points short, rushes in order?

13. Could losses of men, arms, and equipment have been avoided? If so, how? (This is important.) How is the ammunition expenditure estimated? Did the men think of taking the ammunition of the "wounded" and "dead"? This point must be watched closely even in peacetime training.

14. Was the fire throughout aimed mainly at those targets which most obstructed the execution of the mission? (Ammunition tactics.)

(g) What outstanding mistakes were made? What was done especially well? Here the instructor must pay recognition to efforts made, thus spurring the

men to make further efforts. This method of schooling has always been successful; it stimulates the interest of the men in their work and strengthens the self-confidence of the squad leader and his men. Each day of training must be a day of schooling which leaves the trainees with a feeling of deep satisfaction at the end. Therefore, the question is: "What lessons have been derived from the exercise?"

(h) Discussion of the question whether the purpose of the exercise has been achieved and the mission accomplished. All participants, including the assistant instructor, the leader of the enemy, and his men, attend the critique. The company commander, inspecting one platoon one day and another the next, has an opportunity here to clarify doubts.

The critique calls for clear thinking, a soldierly manner of speech, and constant training on the part of the platoon commander and instructor. While the critiques, in the beginning, must be quite explicit, they may become briefer and confine themselves to the most essential points as the training progresses. The less use the speaker makes of written notes, the greater an impression will he make upon his audience. Even the young officer must practice speaking without the aid of notes. A written summary of the exercise is read later in the lecture hall.

c. Conclusion

If the schedule of squad training, as described above, is pursued in a thorough manner, the company commander will derive greater pleasure from the pla-

toon and company training. The more personal attention he pays to the training of the squads, the greater will be his success in turning his company into an effective weapon. It goes without saying that the platoon commander must work hard in training his squads. Nothing will be "handed him on a silver platter"; on the contrary, he must work for it and occasionally sacrifice a Sunday to ride over the exercise area and work out his problem undisturbed. If he goes through his work thoroughly from top to bottom, he will be a "seasoned hand," so to speak, the next time. Tedious though this work may be, attention to details will be rewarded.

In conclusion, it may be well to bring to the mind of the instructing platoon commander the principle set down in "Command and Combat of Infantry." The words may serve him as a guide and spur in his work:

The infantry carries the main burden of combat and is called upon to make the greatest sacrifices. In return, it reaps the highest glory.

The power of the infantry consists in its spirit of the offensive. It is that spirit which the infantry, confident of its inherent strength, must foster. Its combat must be dominated by one will: **FORWARD, STRAIGHT AT THE ENEMY.**